Public Testimony Sign-Up Sheet

Agenda Item C-3(b) BSAI CRAB 'B' SHARES ~~DFEC~~

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2	~~Linda Kozak~~	~~Kodiak AC~~ C.
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7	Steve Minor	NPCA
8	John Moller / dave Fraser	Adak Fisheries / Adak City
9	Terry Leitzell	Jacobs
10	Edward Poulsen	ACC
11	Paul Greenberg	
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13	Lynn Langford Walton	United Crab Harvesters
14	SIMEON SWETZOF / MATEO PAZ-SOLDAN	City of St. Paul
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18	JOE PLESHA	TRIDENT SEAFOODS
19	Florence Colburn	Crab Group of Independent Harvesters
20	John Iani	
21	Leonard Herzog	Alaska King Crab Harvesting Coop
22	Margaret Hall	Rockport, Inc.
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NOTE to persons providing oral or written testimony to the Council: Section 307(1)(I) of the Magnuson-Stevens Fishery Conservation and Management Act prohibits any person " to knowingly and willfully submit to a Council, the Secretary, or the Governor of a State false information (including, but not limited to, false information regarding the capacity and extent to which a United State fish processor, on an annual basis, will process a portion of the optimum yield of a fishery that will be harvested by fishing vessels of the United States) regarding any matter that the Council, Secretary, or Governor is considering in the course of carrying out this Act.

AGENDA C-3(b)
OCTOBER 2007

MEMORANDUM

TO: Council, SSC and AP Members

FROM: Chris Oliver
Executive Director

DATE: September 24, 2007

SUBJECT: BSAI Crab Fishery Management

ESTIMATED TIME
10 HOURS
(all C-3 items)

ACTION REQUIRED

Council direction on BSAI Crab 'B'Shares.

BACKGROUND

(a) Report on crab data collection quality and confidentiality.

This item has been removed from the agenda and will be addressed at the December 2007 meeting.

(b) Committee report and discussion paper on 'B shares'.

Under the crab rationalization program, holders of catcher vessel quota shares receive annual allocations of individual fishing quota (IFQ) of two share types. Ninety percent of the IFQ are issued as "A shares" or "Class A IFQ," which must be delivered to a processor holding unused individual processor quota (IPQ). The remaining 10 percent of the annual IFQ are issued as "B shares" or "Class B IFQ," which may be delivered to any processor. Under this structure, the 90 percent A share allocation is intended primarily to add stability to the processing sector and provide a means for compensated removal of processing capacity from the fisheries. The 10 percent B share allocation is intended to provide negotiating leverage to harvesters, an opportunity for entry to the processing sector, and a check on the processing market (by providing a negotiated market price). The 10 percent B share allocation is intended to provide negotiating leverage to harvesters, an opportunity for entry to the processing sector, and a check on the processing market (by providing a negotiated market price). To address potential disputes over the price and other terms of A share crab deliveries, the program includes an arbitration system. Because of the unique nature of these different allocations and the arbitration system, at the time it adopted the program the Council scheduled a review of these aspect of the program, which was conducted at the Council's March/April 2007 meeting.

On conducting the review at its March/April 2007 meeting, the Council directed staff to prepare a discussion paper examining the uses of B shares under the crab rationalization program and whether those uses are consistent with the Council's original intent. A copy of that discussion paper is attached (Item C-3(b)(1)). The paper includes discussion of legal immunity for the arbitration organizations, arbitrators, and market analysts as the Council requested.

At the March/April 2007 meeting, the Council also appointed an advisory committee to review the discussion paper and address regulatory issues identified in the 18-month review. In response to the Council's direction, the committee has prepared a report to the Council that will be handed out at the meeting. The report describes the committee's recommendations concerning regulatory issues (including draft purpose and need statements and proposed amendments for any issues that the committee believes should be addressed by amendment) and summarizes the committee's discussions of other issues (including the use of B shares under the program).

Draft discussion paper for
Bering Sea and Aleutian Islands crab advisory committee
North Pacific Fishery Management Council
June 2006

At its March/April 2007 meeting, the Council conducted a review of certain aspects of the Bering Sea and Aleutian Islands crab rationalization program. The review included an examination of both the harvesting and processing share allocations and the arbitration program. Based on that review, the Council stated its intent to create an advisory committee to examine the following:

1) the current uses of B shares (those shares exempt from the processing share landing requirements) and whether those uses are consistent with the Council's original intent for the use of B shares, and
2) regulatory issues related to administration of the harvest share and processing share allocations and the arbitration program (see Appendix A).

The Council also directed staff to draft this discussion paper to assist the committee and the Council in examining these issues. The paper originally contained a more extensive discussion of B share uses, which has been edited to avoid redundancy with the committee's report to the Council. The paper also contained a discussion of regulatory issues. Much of that section was removed, since those issues are also addressed in the committee's report. The paper still includes a brief discussion of a potential grant of immunity to arbitrators, market analysts, arbitration organizations, and the third party data providers under the arbitration program, which the Council requested for developing a potential amendment to address liability concerns of those persons.

The paper begins with a brief background section, which describes pertinent portions of the rationalization program. Readers familiar with the program can skip the background section (which is a slight revision of the background in the 18-month review). The paper goes on to include a discussion of the uses of B shares, and their consistency with the Council's intent. The paper goes on to describe the potential grant of immunity to arbitration administrators that the Council could choose to address.

Background

Under the program, eligible LLP license holders were issued quota shares (QS), which are long term shares, based on their qualifying harvest histories. These QS annually yield individual fishing quota (IFQ), which are privileges to harvest a particular amount of crab in pounds in a given season. The size of each annual IFQ allocation is based on the amount of QS held in relation to the QS pool in the fishery. So, a person holding 1 percent of the QS pool would receive IFQ to harvest 1 percent of the annual total allowable catch (TAC) in the fishery. Ninety percent of the IFQ are issued as "A shares" or "Class A IFQ," which must be delivered to a processor holding unused individual processor quota (IPQ).[1] The remaining 10 percent of the annual IFQ are issued as "B shares" or "Class B IFQ," which may be delivered to any processor.[2] Processor quota shares (PQS) are long term shares issued to processors. These PQS yield annual IPQ, which represent a privilege to receive a certain amount of crab harvested

[1] Currently, three percent of the harvest share pool is issued to captains as C shares. Those shares are not subject to IPQ landing privileges during the first three years of the program. During that period, the IPQ corresponding to the C share allocations are withheld. The Council is currently considering extending this exemption indefinitely.
[2] The terms "A share" and "Class A IFQ" are used interchangeably in this paper, as are the terms "B share" and "Class B IFQ".

with Class A IFQ. IPQ are issued for 90 percent of the vessel owner IFQ, creating a one-to-one correspondence between Class A IFQ and IPQ.[3] In addition, A share IFQ and IPQ in most fisheries are subject to regional landing requirements, which require deliveries to be made in a specific designated region.

The A share/B share allocation structure has the effect of limiting market choices of participants, since only the 10 percent allocation of B share landings are free to be sold to any buyer. Under this structure, the 90 percent A share allocation (with corresponding IPQ) is intended primarily to add stability to the processing sector and provide a means for compensated removal of processing capacity from the fisheries. The 10 percent B share allocation is intended to provide negotiating leverage to harvesters, an opportunity for entry to the processing sector, and a check on the processing market (by providing a negotiated market price).[4] To aid participants in resolving price disputes, the Council developed a binding arbitration program.

The arbitration system serves several important purposes in the program. It coordinates the matching of A share IFQ held by harvesters with IPQ held by processors. For a 5-day period starting when IFQ and IPQ are issued, shares are matched only by mutual agreement of share holders. After that period has expired, shares may be matched either by agreement or by unilateral commitment of the IFQ holder. Throughout, holders of unused IPQ are required to report the amount of unused shares held to holders of unused IFQ (updating that report within 24 hours of any change). Although this share matching process may aid in establishing commitments to deliver and receive A share IFQ landings, the terms of those transactions may be disputed. The arbitration system defines a procedure intended to assist participants in coming to reasonable terms for those deliveries. If the parties are unable to negotiate a settlement, an arbitration procedure may be used to resolve those terms.

The 10 percent annual allocation of B share IFQ is free of landing restrictions and may be landed with any processor in any location. The Council intended these B shares to serve a few purposes. First, the allocation provides some degree of competition, which might otherwise be lacking under a system in which harvesters are compelled to land catch with processors holding IPQ. Second, by allowing B shares to flow to their most valuable use, the allocation was thought to provide a check on the market, in the event that IPQ holders were not aggressively pursuing market opportunities for their products. A third use of B shares could be to facilitate processor entry (NPFMC/NMFS, 2004a).

To help ensure these intended benefits are realized, B shares are allocated to each harvester only to the extent that the harvester is independent of processor affiliation.[5] Allocating shares to independent

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[3] Although 90 percent of vessel owner IFQ issued each year are issued as A shares, individual allocations can vary from 90 percent. Holders of PQS and their affiliates receive their IFQ allocations exclusively as A shares to the extent of their affiliate's processor share holdings (i.e., B shares are not allocated for any IFQ that can be matched against affiliated IPQ). The rationale for issuing only A shares to PQS holders and their affiliates is that these persons do not need the extra negotiating leverage derived from B shares. To maintain 10 percent of the IFQ pool as B shares requires that unaffiliated QS holders receive more than 10 percent of their allocation as B shares (and less than 90 percent A shares).

[4] It should be noted that the limitation on the market resulting from the 90 percent A share/IPQ allocation dampens the market for B share landings by limiting the size of the open market for landings. So, the B share price (while providing an indication of the free market price) may not reflect the price that would exist in the absence of the A share/IPQ allocations.

[5] Affiliation under the regulation exists in the case of either functional control of the QS holder or common ownership in excess of 10 percent (50 CFR 680.2). A harvester with a processor affiliation would receive its

harvesters is intended to facilitate competition among processors for landings that would be lacking for shares held by harvesters with affiliations to IPQ holders, who would likely delivery B share landings to their affiliated processors. Providing B share allocations only to independent harvesters also could assist B shares in serving the Council's purpose of providing a check on market opportunities. If market opportunities are being neglected by IPQ holders, harvesters independent of IPQ holders might pursue those opportunities. Lastly, affiliates of IPQ holders are unlikely to solicit entry of competitors, so allocation of B shares to independent harvesters might increase the potential for entry.

Uses of B shares

In the first two years of the program, some portion of the B share allocation has served each of the intended purposes. Some B share landings have been aggressively marketed to the highest bidder; some B share landings have been made to processors without IPQ or any history in the crab fishery; and some B share landings have been used to develop new products (such as live and fresh crab). Despite these successes, some harvesters express frustration that their ability to use B shares freely is compromised by the system.

Some harvesters have asserted that B shares cannot be freely marketed because they believe the shares need to be reserved for logistical purposes. In the Bering Sea *C. opilio* fishery, ice and a processor fire complicated North region deliveries for portions of the first two seasons. Regional and processor share delivery requirements on A shares limit the ability of harvester to respond to midseason contingencies affecting deliveries. For example, harvesters fishing a portion of their allocation that would be used for a North A share delivery will need commensurate South A share holdings to shift the deliveries to the South. Furthermore, reconciling the need for flexibility of delivery relationships under a system that is intended to ensure that all A shares and IPQ are committed in the preseason presents a challenge.

With all A shares and IPQ fully committed in the preseason, only arrangements that pool a relatively large amount of share holdings from both sectors are likely to successfully accomplish the coordination needed for these changes in commitments. On the harvest side, the ability of participants to organize standdowns (or strikes) suggests some ability to coordinate fishing across the fleet. Whether this ability can extend to coordinating changes in the timing of deliveries across several cooperatives and processors is not known. Extending the coordination to the processing sector may present less of a logistical challenge, since fewer IPQ holders participate in the fisheries. Processor coordination, however, could be complicated by antitrust laws that are intended to prevent collusive behavior. Currently, midseason landings coordination is also complicated by the time required to administer share transfers. Ongoing efforts at NOAA Fisheries RAM office to streamline transfer administration should decrease these times in the future. Provision for post-delivery transfers (currently under consideration by the Council) could aid in addressing market frictions that arise from transfer processing time. The extent to which B shares will be used to address midseason contingencies in the future is not known, and likely depends on the willingness and ability of participants in both sectors to work together to address those contingencies by changing A share and IPQ commitments.

Several harvesters have also stated that they have chosen to use their B shares to improve harvest

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allocation of IFQ as A shares to the extent of affiliated processor share holdings. So, a harvester that holds 1 percent of the QS in a fishery that is affiliated with a processor that holds one-half of one percent of the processor share pool would receive Class A IFQ to match against for one-half of one percent of the IPQ pool. The remainder of the harvester's IFQ allocation would be subject to the A share/B share split. Harvesters with no processor affiliation receive their full allocations subject to the A share/B share split.

efficiency overall. Two specific scenarios have been described. Specifically, harvesters have chosen to use B shares to ensure that they can fully harvests an A share delivery. Rather than risk underharvesting an A share delivery, which could require an additional trip, some harvesters have chosen to exceed their A share landing commitment, delivering any A share overage using B shares. In other cases, harvesters have elected to improve efficiency by harvesting B shares on a trip that is primarily an A share trip to fill a vessel's tanks and avoid making an additional trip.[6] In both of these instances, harvesters have elected to use their B share allocations to improve their operational efficiency. To some extent, these adaptive uses of B shares are necessitated by the program structure. The A share landing restrictions effectively subdivide each harvest share allocation among the various IPQ holders to which landings are committed, limiting the ability of harvesters to achieve operational efficiencies. Yet, greater coordination of harvest activities across participants could reduce the portion of the B share pool that is used for these efficiency gains.[7]

Assessing the extent to which B shares are serving the purposes intended by the Council is confounding for a several reasons. The program has been in place only two full seasons. Given the short tenure of the program and its complexity, a period of adjustment is likely before any aspect of the program achieves its long term effect. Furthermore, the nature of the fisheries, the markets they serve, and the program also present challenges for understanding B share use. Since A share landing prices are based in large part on historic prices obtained in a competitive market, small differences between A and B share landing prices may not suggest that B share landings are not subject to competition. In addition, price differences, in and of themselves, may not reveal the extent of competition, since delivery terms influence price. The use of B share landings to support processor entry is also difficult to assess. B share landings may not be sold to new entrants, if current processors are paying competitive prices for B share landings that cannot be matched by processors with less experience in or capacity for crab processing and marketing. In addition, any absence of the use of B shares for new product development may be a sign that current production is adequately serving both available and potential markets.

To determine whether the use of B shares is consistent with the Council's purposes, the intent of a person using B shares must be assessed. Beyond the straight forward difficulty of knowing a person's intent, several other issues arise in assessing a B share user's intent. A person may be influenced by several considerations when deciding when and how to use a B share allocation. If the person's decision is influenced by several factors (including one or more intended by the Council) is it reasonable to conclude that the shares are (or are not) serving an intended purpose. The potential for a person to be influenced by several motivations should be considered when assessing the extent to which B share use is consistent with the Council's intent. Assessing a person's intent is also complicated by changes in a person's motivation over time. For example, at the start of a season, a person may reserve a B share allocation intending to pursue a potential new market late in the season. If prices drop significantly during the season that market opportunity may not exist. Yet, it could be argued that, despite the B share allocation being landed as part of a large A share delivery, the B share allocation has served an intended purpose because of its availability to a new market. On the other hand, a harvester could reserve B shares until late in a season to ensure the shares are available to address delivery contingencies. At season's end, these B share landings might be marketed to the processor offering the best price at the time. Yet, the harvester may reasonably argue that it did not receive the full benefit of the shares intended by the Council.

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[6] In some cases, harvesters have elected to make multiple deliveries from a single trip, but most harvesters prefer to offload at a single location on each trip to avoid deadloss.

[7] In the past, deadloss has been suggested as a potential unintended use of B shares. This practice seemed to have been adopted for some landings in the first year of the program, but does not appear to have persisted.

The assessment of whether B shares are serving intended purposes is also complicated by the extent to which harvester perceptions affect their choices. For example, a more conservative harvester may choose to reserve a greater quantity of B shares for late season contingencies than a less risk averse harvester. Both harvester decisions could be considered reasonable, but the choice clearly affects the extent to which B shares are being used to pursue Council intended purposes. These perceptions can be affected by several factors, including relationships with IPQ holders and potential markets for B share landings. A harvester that is committed to an IPQ holder that has shown flexibility to address harvester delivery complications is less likely to reserve B shares to address contingencies. Similarly, an extremely good market price can help a harvester overcome reluctance to use B shares early in a season.

The complexity of the program and the variety of harvester motivations and influences complicates any assessment of B shares use. Any analysis of the issue may reveal factors that effect B share use, but is unlikely to be conclusive.

Immunity for arbitrators, market analysts, arbitration organizations, and third party data providers

The arbitration program is established through arbitration organizations that are required to enter contracts with harvesters, processors, market analysts, arbitrators, and, possibly, a third party data provider. While each of these contracts is required to contain several provisions by regulation, several aspects of the program are not fully set out in the regulations, but must be agreed by the parties to the contracts or decided by an arbitrator or market analyst. For example, as noted by the committee, arbitration proceedings under the lengthy season approach are required to be initiated by the end of the crab fishing year (June 30th). The regulation, however, provides no guidance on the timing of the proceeding itself. The contract arbitrator was left to decide the timing of the proceeding without guidance from the regulations. Similarly, the process for development of the market analyst/formula arbitrator's report is not fully described in the regulation. Also, the specific process for binding arbitration proceedings is not fully specified by the regulation, but must be decided by the arbitrator after meeting with the parties.

In the first few years of the program, arbitration organizations, arbitrators, and market analysts have expressed some concern that potential liability could influence decision making. For example, if an arbitrator is confident that a participant will sue, if the arbitrator makes a certain finding, the arbitrator's independence could be compromised. Likewise, arbitration organizations might choose not to make changes in the arbitration structure (which are agreed to by participants in both harvesting and processing sectors, but are not addressed by the regulations), if they fear potential lawsuits related to those changes. At the extreme, the threat of liability could make it difficult to find persons willing to perform arbitration services.

Arbitrators may be granted immunity from liability under common law or state statute, but the grant would not be unambiguous unless it is litigated and upheld in court. The rationale for immunity is that arbiters serve a judicial function similar to judges or administrative examiners, who receive immunity. To address this concern, the Council could amend current regulations to require a provision of immunity in the various arbitration system contracts. These provisions would safeguard arbitration organizations, market analysts, arbitrators, and third party data providers from liability for acts taken in their various capacities.

Although a grant of immunity would protect these persons from liability, immunity typically extends only

to the extent of one's jurisdiction. This limitation raises the question of whether the immunity would extend to decisions (or agreed contractual provisions) that are not required by the regulations. If the Council is concerned that the arbitration administrators could be inhibited from agreeing to provisions that could improve the arbitration program but are not contained in regulation, it could consider amending the arbitration regulations to include a provision that permits the arbitration organizations, market analysts, arbitrators, and third party data providers to include any additional provisions in the various contracts that are intended to improve the working of the arbitration system. Such a provision would clarify in the regulation the intent of the Council that the industry administer the arbitration program, including minor modifications or additional provisions not included in regulation, which are intended to improve the function of the system.

APPENDIX A
C-4(a) Crab Rationalization 18 month review
Draft Council Motion
April 2, 2007

The Council directs staff to draft a discussion paper analyzing how B shares are being used and whether their uses are consistent with the original intent. A draft of this paper will be prepared by June 2007, for discussions by a BSAI crab advisory committee (see below) and a final draft will be presented to the Council in October 2007.

The Council requests a staff analysis to allow C shares to remain open-access shares, without regional designation and A and B share splits. Analysis needs to be initiated now, or the C shares will de facto become designated to the regions and the 90/10 A/B split will occur automatically at the three year anniversary of the program's implementation. Also, include options in the analysis for extension of the three year sunset date on leasing of C shares and present it at the June meeting.

Additionally, staff is requested to provide a discussion paper in October 2007 concerning legal immunity for the arbitration organizations, arbitrators, and market analysts.

The Council shall appoint a BSAI crab advisory committee to address the draft discussion paper on B shares (see above) and the regulatory issues identified in the 18 month review. The committee will work with staff to make recommendations to the Council in October 2007 on issues such as the elimination of market reports for crab fisheries not likely to open in a given year, to change the 50 day market report requirement for golden king crab to 30 days, to allow timely supplements to the market reports, alternatives to extend the time periods for share matching, and other relevant issues.

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CC: Alaska Governor Sarah Palin, AG Talis Colberg, ADF&G Comm. Denby Lloyd, & Fishery Liaison Cora Chrome, State Sen. Gary Stevens and Rep. Gabrielle LeDoux — Juneau, Alaska; U.S. Senators Ted Stevens & Lisa Murkowski and Congressman Don Young — Washington DC; Dr. William Hogarth and Dr. James Balsiger — NOAA Fisheries, Silver Springs MD; V.P. Dale Schwarzmiller, Peter Pan Seafoods — Seattle WA; King Cove Mayor Ernie Weise; et al.

September 13, 2007

RE: RESTRAINT OF TRADE — MARUHA-NICHIRO MERGER CAUSES LOSS OF LONG-TERM MARKET FOR INDEPENDENT VESSEL OWNER/CRAB SELLER

To Whom It May Concern:

On September 12, 2007, I received a call from Dale Schwarzmiller, vice president (former King Cove crab manager) for Peter Pan Seafoods Inc. of Seattle, Washington (PPSF). For over 20 years, my vessels (currently F/V North Point & F/V Stormbird) have been delivering North Pacific crab catches to PPSF's plant located in King Cove, Alaska. Schwarzmiller informed me that I should now "look for a new market" for my federally allocated crab deliveries.

I view this boycott of my vessel's deliveries of crab as a forthcoming Restraint of Trade, which will result in serious financial harms to my business — explained further, below. I have already been hampered by the failures of NOAA Fisheries to make timely and accurate announcements of the total allowable catches (TAC), thus releasing total industry quotas, so that I can acquire (within the 5 days requirement) my actual fishing quotas to match-up with a processor. Now, the processors are sorting through their fleets and picking boats, but I can't pick a processor! This will add inefficiencies to my vessels' operations and cost me dearly in additional fuel, crab 'dead loss', and other expenses solely to accommodate further consolidation in the fishing industry, which causes additional predatory pricing harms to my business, as well.

Why is this happening? First of all, PPSF is a wholly-owned subsidiary of a foreign fishing company — Nichiro Gyogyo Kabushiki Kaisha, of Tokyo, Japan. Nichiro (the third largest Japanese fishing transnational corporation) is currently the subject of a proposed Merger — as the largest Japanese fishing TNC, Maruha (formerly Taiyo) will soon acquire all of its stock. The merger will require Maruha-Nichiro to adjust downward its combined total of crab quota deliveries by divesting itself of approximately 6% of its quota deliveries. They need to stay within established regulatory caps under the 'Crab Rationalization' regime and its sideboards, as outlined by the North Pacific Fishery Management Council (NPFMC).

Since I do not belong to a crab cooperative that directly matches shares of fishing quota to processing quota (as required by the anticompetitive regulations of Crab Rationalization), and must individually match my vessels' shares, it appears that I am being "kicked out" of my long-established market. I strongly protest this infringement on my rights to operate under a marginal economic model, rather than adhere to (government-enforced) coercive monopolistic practices. It will require me to spend the extra operating costs and days running my vessel to another market, simply for the convenience of the merging parties and to whom I am forced to deliver crab to next.

Fishery regulations have already chased me out of delivering crab to the vessel's home port in Kodiak, where I live —from contributing more to my community's economy. King Cove was the nearest geographically acceptable delivery port, capable of storing my crab gear (pots etc.), and a community where I have long-established the necessary good business and personal relations, and enjoyed doing business. On the other hand, Dutch Harbor is a *de facto* branch economy of Japan.

This merger and resultant boycott of my crab sales will force me to deliver to the port of Dutch Harbor or Akutan. As a consequence of the merger, I will also not be able to deliver to Maruha's plant in Dutch Harbor (the Captain's Bay plant known as Western Alaska Fisheries). I refuse to be told that I must deliver to the sole processor in Akutan, Trident Seafoods — which attempted another merger with Ocean Beauty Seafoods in 2006 (one halted by the Antitrust Merger department). This leaves me with no choice but to deliver to one of two other plants in Dutch Harbor/Unalaska. Since Alyeska Seafoods is also owned at least in part by Maruha, this likely means that I will be forced to deliver to UniSea (100% owned by Nippon Suisan) or Icicle Seafoods' floater (currently being acquired by Fox Paine — an equity holding company whose primary goal will be to squeeze profits out). To date, my efforts to establish a new market have been unsuccessful, as UniSea claims it already has enough quota matching deliveries.

Aside from additional (real) concerns about Collusive Pricing, the immediate result of this regulatory Restraint of Trade is both Anticompetitive and Exclusive. **The only reason this economic situation has occurred is that government — through the Crab Rationalization regulatory program — has interceded in the exercise of a free market by granting exclusive rights,** known as Processor Quota rights with accompanying requirements of "share matching" between crab fishery quota holders (vessel owners) and PQ holders (processors). **This undue "market power" has twisted Antitrust doctrine for the seafood industry into the establishment of coercive monopolies — a seriously flawed economic structure.**

I take serious issue with the shares match-up requirement, because it's part of an illegitimate coercion of fleets through tying agreements. Processors have been pressuring vessel owners who hold quotas in other fisheries (like Halibut individual fishing quotas) to also deliver their non-crab species IFQs in order to maintain their crab markets, which presents readily apparent illegal "tying arrangements" that coercively condition the sales of one product to the sales of another.

Even though I am immediately concerned with practices which are more likely to be genuinely exclusionary than tying, I believe that the Department of Justice Antitrust division should fully examine all of these practices under the price-discrimination theory of Tying, and regarding the related Leverage Problem. There is no free market ability for new entrants, either.

There are other concerns in this closed-system realm of Predatory Pricing. Foremost is that with the exclusive arrangement of pre-season share matching, when one 'competing buyer' pays ten cents less per pound delivered, a seller-vessel cannot thereby exercise an immediate right to move to a higher paying alternative buyer. This linkage also has 'Lender Liability' implications for those who carry loans on their vessels, as lenders cannot be assured that borrowers may seek the highest possible prices for their business' product in order to enhance loan payoff potential.

In order to move to another buyer, one must first find another crab vessel "seller" who would willingly switch markets to accept a dime less per pound by switching to a lower-paying buyer! This is not a conceivable marginal economic decision that another seller would willingly make.

Contrast this also with the geographic facts — and related costs, and historical pricing practices. It used to be that a processing plant in a location like King Cove would pay an additional ten cents per pound to attract crab deliveries from vessels that had to burn more fuel to reach that port, when fishing grounds that are closer to other ports.

For my vessels to deliver to Dutch Harbor, yet keep pot storage and an equipment container-van located in King Cove, will mean upwards of $6,000 per season in added fuel costs, and a loss of at least four days of fishing/operating time (given two trips at 52 hours roundtrip, and $3,000 per trip in fuel) — not to mention the certainty of delivery scheduling problems as my vessels fit into the bottom priority rung when scheduling deliveries to the new market.

In addition, were I to offload pots first at King Cove, before traveling to Dutch Harbor to deliver my crab, the extra travel time will result in a greater "dead loss" of crab (a biological waste of a precious food resource) — a cost that I solely bear. Will the government pay me for all of these additional costs? Or if I choose to move my equipment, will the government (or Maruha-Nichiro) reimburse me? **Why should the efficiency of my business have to continually suffer in order to accommodate alleged efficiencies for a processor buying-cartel?** Especially when it refuses to do more profitable operations within the USA: the host nation for this cartel.

While this will not specifically have a foreclosure effect (bankruptcy) upon my business, it will certainly cost me (& partners and heirs) dearly. But my concerns also extend to the community of King Cove, as it seems that removing independent crab deliveries such as mine from that processing plant will also mean that more overall crab is processed elsewhere. The King Cove community was specifically promised by Senator Ted Stevens — who slipped Crab Rationalization implementation legislation into the 2004 Consolidated Appropriations Act as a Rider — a better future. The exact opposite has occurred, as King Cove has been devastated by the program. I strongly protest that I am now being forced to further harm the community by considering moving my operations, unless I endure severe costs being forced upon my vessel were I to maintain gear and storage operations in King Cove — my long desired port of preference.

Furthermore, I have no control over situations wherein the company I deliver to may make custom processing or product distribution arrangements with a 'competitor' (another cartel collectivist) in a manner which serves to further depress my market prices. Recent Crab Cooperative reports regarding Price Arbitration point out serious problems that additionally depress prices — aside from the lack of free market forces due to the bad Crab Rationalization regulatory regime.

The reports show that Value-Added (new products) processing is not occurring and that the industry is "going backwards" in that regards, "rather than investing in production, sales, or marketing efforts that would increase the value of crab." Instead, "processors have been cutting back on those investments." In addition, vessels are taxed over 10% for a Western Alaska CDQ welfare program — a discriminatory statute that violates the Constitution's 'Equality Clause'.

Why must my business suffer predatory pricing through the excessive and unwarranted market powers given to the coercive monopolists to whom we must deliver 90% of our crab? Worse yet, why must my businesses endure the reduced likelihood of higher prices because a stabilized market should have led to increased investments to ensure higher valued product lines within a US nexus, but did not? Could it be that the predatory (reverse) dumping of Alaska crab on the Japanese market through the parent-subsidiary relationships (whereby US hosted firms are hollow subsidiaries designed to transfer profits outside a US tax nexus) — one only made stronger by the Maruha-Nichiro consolidation — is abusing the tax law requirements of showing appropriate shares of global profits on the United States side of the global market equation?

The IRS already has dealt with cases of seafood companies doing illicit bookkeeping regarding Section 482 Transfer Pricing. One must always remember that in global economics, "Structure implies Strategy." This restructuring of the crab processing industry simply serves, once more, to enhance the abilities of the buyers' cartel to again take more from the delivering sellers of crab — i.e., from myself and other vessel owners (U.S. citizens).

It has been 'suggested' that I join a delivery Cooperative Association, like other vessels. However, I challenge that forced market behavior for a multitude of reasons, including the imposition of a legal liability inherent to belonging to a trade association that in consort with other cooperatives and crab processors demonstrates "the effectiveness of trade associations as agents of collusion." I am specifically referring to the now normalized practices of consolidating vessel quotas within cooperatives accompanied by practices of extracting exorbitant leases for IFQ (upwards of 60 to 70% off-the-top of delivery revenues) going directly to vessel owners/quota holders. Working together, they are having the detrimental effect of causing economic harms on the class of crewmembers (deckhands who are also vessel operators) who traditionally shared between 35 and 40% of the catch less reasonable expenses. I continue to pay my crews fairly, and do not take a quota rent off the top. In continued efforts to deny these stakeholders redress, the linked cooperatives and their processors are joined collusively to avoid sharing historical rights.

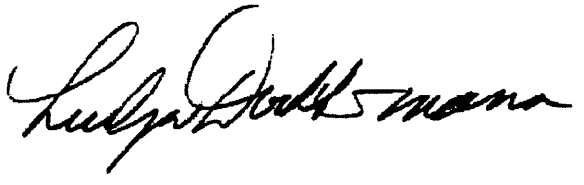
In addition, the binding price arbitration (and even non-binding arbitration) system is serving as a mechanism to attain harmony with respect to (low) future prices. In a world of increasing numbers of consumers, given the fixed supplies of our crab, this means of constraining prices causes an inefficient allocation of resources — already demonstrated by the lack of value-added processing in the USA. I.E., authorizing statute (Stevens' 2004 CAA rider) or not, this is a garden-variety cartel or price-fixing agreement that is socially inefficient as well as a 'per se' horizontal price fix. It must always be kept in mind that a reasonable price — the rational price — is a competitive price. And, the costs of having this cartelized monopoly structure clearly outweigh any business value from alleged efficiencies — a social value that has not been attained while other social values suffer under this regime.

In closing, I request that the Department of Justice Antitrust division fully examine these problems, as I believe that we already have industry proof of noncompetitive behavior that should require Section 1 remedies under the Sherman Act. And the known harms already imposed on communities, crews and vessel owners to date from the Crab Rationalization regime should also warrant a ready route to divestiture under a Section 5 proceeding of the Federal Trade Commission Act — whereby the leading firms in this highly concentrated industry should be dismembered because of multiple obvious coercive monopoly structural damages to date.

At the least, Processor Quotas and forced delivery Cooperatives (linkages) should be dismantled. A clear examination and recommendation from Justice Antitrust would go a long ways toward ensuring Congress readjusts the fishery laws to once again coincide with democratic and open market tenets, closer to pro-competition principles upon which this Nation depends.

For the part of state and federal officials reading this letter, please demonstrate due respect by a swift reply in writing that indicates your sincerity and proposed actions to correct these wrongs.

Sincerely yours,



Ludger Dochtermann, F/V Stormbird & F/V North Point
P.O. Box 714; Kodiak, Alaska 99615 Tel: 907.486.5450

Kodiak Island Borough
OFFICE of the MAYOR
710 Mill Bay Road
Kodiak, Alaska 99615
Phone (907) 486-9301 Fax (907) 486-9374

September 21, 2007

North Pacific Fishery Management Council
P.O. Box 103136
Anchorage, AK 99510

Sent by fax: (907) 271-2817

Mr. Chairman and members of the Council:

The Kodiak Island Borough is hereby requesting that the North Pacific Fishery Management Council (NPFMC) extend the 18-month review period for the Bering Sea Crab Rationalization Program. Our primary basis for this request is that we anticipated there would be proposed adjustments to this program that would be subjected to public review and council staff analysis. We have not had an opportunity to participate in this discussion.

In addition, the Kodiak Fisheries Advisory Committee was established this past summer by the Kodiak Island Borough Assembly and the City of Kodiak Council as an advisory body for the community on fishery issues that will have an impact on Kodiak. The group consists of 20 individuals from all user groups in the community.

The advisory committee has held two meetings since being appointed. The most recent meetings were held on Thursday, September 20. The members spent a significant amount of time discussing the October North Pacific Fishery Management Council meeting and issues on the agenda.

The advisory committee intends to plan future meetings and address issues that will be before the NPFMC well in advance of planned Council action. They will present recommendations to the Kodiak Island Borough Assembly and Kodiak City Council with sufficient time before proposed NPFMC action in order for the Assembly and City Council to develop recommendations and to present testimony and public comment at your meetings.

The one issue that has come forward is the issue listed on your agenda as C-3 – BSAI Crab Fishery Management, item (B). As you know the crab advisory committee formed by the NPFMC has held several meetings regarding the "B" shares in the crab rationalization program. They have tried to determine whether they have been used as the Council intended. It is the understanding of the Kodiak Fisheries Advisory Committee that the NPFMC Crab Advisory Committee members are not in consensus on this matter. As a result, we would ask that this item be carried forward to the December meeting to allow the public to be involved before the decision is made.

Other issues that would indicate a little more time should be spent on the Being Sea Crab Rationalization include:

a. Pending NPFMC action considering custom processing exemptions for the small and remote fisheries of the BSAI.
b. The Stellar Sea fire this past January and the impacts to the crab harvesting fleet, some of whom live in Kodiak.
c. The fact that Unisea did not apply for their golden king crab IPQ this year.
d. Concerns regarding the pending merger between Maruha and Nichiro and impacts to the community of King Cove and crab harvesters that have sold product there in the past.
e. Concerns with the need for continuing analysis of the issues surrounding the 90/10 processor share provision.

The Kodiak Island Borough is requesting that the NPFMC continue the analysis of the issues surrounding the 90/10 processor share provision and extend the 18-month review period for the Bering Sea Crab Rationalization Program. There are important questions still to be answered and we are requesting the opportunity for involvement and input to these important issues.

Thank you for considering this request.

Sincerely,

OFFICE OF THE BOROUGH MAYOR

Jerome M. Selby
Borough Mayor

Office of the Mayor and Council
710 Mill Bay Road, Room 220, Kodiak, Alaska 99615

September 26, 2007

North Pacific Fishery Management Council
P. O. Box 103136
Anchorage, AK 99510

Via Fax: 907-271-2817

Dear Chair and Council Members:

The City of Kodiak requests that the Council continue analysis of the issues surrounding the 90/10-processor share provision and extend the eighteen-month review period for the Bering Sea Crab Rationalization Program.

This past summer, the City of Kodiak and the Kodiak Island Borough jointly established the Kodiak Fisheries Advisory Committee. The Committee is comprised of twenty individuals from the wide variety of fishing groups in our community. Attached is a copy of the City's resolution creating the Committee. The Committee has only been able to hold two meetings since being established. The most recent meeting was held on Thursday, September 20. The members spent a significant amount of time discussing your October agenda.

The Advisory Committee intends to hold future meetings and address issues that will be before you well in advance of planned action. The Committee intends to present their recommendations to the City Council and the Borough Assembly with sufficient time before your meetings, so that in the future the City and Borough can provide you with substantive recommendations on issues of concern to our community.

However, there is an issue that will be addressed at your upcoming meeting about which the Committee does not have time to reach a substantive recommendation and have accepted by the Kodiak City Council and the Kodiak Island Borough Assembly. That issue is item C-3 – BSAI Crab Fishery Management, item (b) on your October agenda. The members of the Kodiak Fisheries Advisory Committee feel strongly about this issue and have requested that the City and Borough provide you with a letter on the agenda item.

We are aware that the Crab Advisory Committee you have formed has held several meetings regarding the "B" shares in the crab rationalization program. They have tried to determine whether they have been used as the Council intended. It is the under-

standing of the Kodiak Fisheries Advisory Committee that Crab Advisory Committee members have not developed a consensus on this matter.

Several issues that would indicate further review of the topic is needed are:

a) Pending Council action considering custom processing exemptions for the small and remote fisheries of the BSAI.
b) The Stellar Sea plant fire this past January and the impacts to the crab harvesting fleet, some of who live in Kodiak.
c) The fact that Unisea did not apply for their golden king crab IPQ this year.
d) Concerns regarding the pending merger between Maruha and Nichiro and impacts to the community of King Cove and the crab harvesters that have sold product there in the past.

As a result of these and other concerns about the BSAI crab rationalization program, the City of Kodiak requests that you continue the analysis of the issues surrounding the 90/10-processor share provision and extend the eighteen-month review period for the Bering Sea Crab Rationalization Program. Thank you for your consideration of our comments.

Sincerely,

Carolyn L. Floyd

Carolyn L. Floyd
Mayor

DRAFT

Plesha C-3(b)

Allocations of Harvesting Quota in the Shore-based Whiting Fishery

By Christopher C. Riley & Joseph T. Plesha*

The Pacific Council is in the process of examining the possibility of rationalizing[1] the Pacific whiting fishery through an individual quota-based management system. As part of this process, the Council must decide who will receive allocations of harvesting quota. But tens of millions of dollars have already been invested in harvesting and processing Pacific whiting. When the whiting fishery is rationalized about ninety percent of the value of fishing vessels and processing plants will be taken from their owners and given to those who receive allocations of quota. This paper describes how that expropriation occurs and argues that owners of fishing vessels and processing plants should receive allocations of quota to compensate for the expropriation of their investments.

I. Introduction

Recently enacted amendments to the Magnuson-Stevens Fishery Conservation and Management Act[2] directed the Pacific Fishery Management Council to "develop a proposal for the appropriate rationalization program for the Pacific trawl groundfish and whiting fisheries, including the shore-based sector of the Pacific whiting fishery under its jurisdiction."[3] Under this Congressional direction, the Pacific Council is analyzing rationalization of the groundfish and whiting resources through allocations of harvesting quota to private entities.

Fishery managers understand that private ownership[4] of fishery resources is essential to maximize efficient utilization of those resources. But these efficiency gains are realized regardless of who is allocated ownership of harvesting quota.

As an example, the pollock Community Development Quota program in the North Pacific allocates ten percent of the Bering Sea pollock Total Allowable Catch to villages in Western Alaska. These CDQ communities had no involvement (initially, at least) in the pollock fishery. The pollock quota allocated to CDQ communities was simply leased by those communities to companies involved in the pollock fishery. It was very similar to an auction, as the CDQ communities generally leased their pollock quotas to the highest bidder. Because the fishery was rationalized — albeit into the hands of entities that were outsiders to the fishery — the harvesting and processing of CDQ pollock was as efficient as if a pollock company itself owned the quota.

So far the Draft Trawl Individual Quota Environmental Impact Statement generally examines why rationalizing the fishery will result in greater efficiency. The EIS lists the goals of the program as (1) increase regional and net national benefits; and (2) achieve

capacity rationalization through market forces. The EIS lists the program's objectives as (1) provide for a profitable fishery; (2) minimize negative ecological impact; (3) reduce bycatch; (4) promote individual accountability; (5) increase operational flexibility; (6) minimize adverse effects on fishing communities; (8) promote economic and employment benefits; (9) provide quality products to the consumer; and, (10) increase safety. The EIS explains why the proposed rationalization program meets the goals and objectives and is thus more efficient than the existing management system. But *any* allocation of harvesting quota will achieve the goals and objectives in the EIS, regardless of whether the initial recipients of the quota are vessel owners, processing plant owners, coastal communities, the federal government, or taxi cab drivers from New York City.

The National Environmental Policy Act requires an examination of the direct and indirect effects of any allocation.[5] Because the efficiency gains of rationalization occur regardless of who receives initial allocations of harvesting quota, NEPA requires more than an analysis of why rationalizing the whiting fishery will meet the listed goals and objectives: NEPA requires an examination of why one particular allocation of harvesting privileges is preferable over another potentially reasonable allocation. Even though the most controversial aspect of this proposal is the initial allocations of harvesting privileges, the EIS does not yet contain an analysis of why one particular allocation of quota is better than another.

At its March meeting the Pacific Fishery Management Council chose to analyze allocations of whiting quota to both limited entry permit holders[6] and owners of processing plants. The purpose of this paper is to examine why the Council's proposed allocation of quota to both vessel owners and owners of primary processing facilities in the shore-based whiting fishery is appropriate.[7]

II. Proposed Allocations of Quota In The Shore-based Whiting Fishery

With regard to the shore-based sector of the Pacific whiting fishery, the Council is analyzing two alternatives:

- Allocating quota to owners of limited entry permits and the owners of whiting processing plants; and,

- Allocating quota to owners of limited entry permits who have formed "cooperatives" that require some form of linkage to the whiting processing plants to which the permit holders historically deliver their harvests of whiting.

It is important to note that "fishermen" are not being considered to receive allocations of quota. Those under consideration to receive allocations of harvesting quota in the whiting fishery are either owners of vessels (or a surrogate for vessels, limited entry permits) or owners of processing plants.[8]

In fact, the potential recipients of whiting quota are virtually all corporations. Just as an example, below are the limited entry permit owners and whiting processing plant owners for 2006. (It is not known if these entities would receive allocations under the proposed alternatives. The list is provided solely as an example of the type of recipients of quota under the proposed alternatives.)

Limited Entry Permit Owners Harvesting Whiting (2006)	**Processing Plant Owners Processing Whiting (2006)**
Bay Islander Inc.	Alber Seafoods, Inc.
Blue Moon Fisheries, Inc.	Bornstein Seafoods, Inc.
Blue Sea Fisheries, Inc.	Da Yang Seafoods, Inc.
Jay Bornstein	Del Mar Seafoods, Inc.
California Shellfish Company, Inc.	Jessie's Ilwaco Fish Co.
Captain Andy Fisheries, Inc.	Ocean Gold Seafoods, Inc
Cassandra Anne, LLC	Ocean Beauty Seafoods Corporation
Chellissa Fisheries, Inc.	Pacific Seafood Group
DASL Inc.	Trident Seafoods Corporation
Ex-1 Corporation	
Fury Group, Inc.	
F/V Jeanette Marrie, Inc.	
F/V Pacific, Inc.	
F/V Seeker, Inc.	
George Allen, Inc.	
Gerald Gunnari	
HB Lee, Inc.	
Hodges and Moreland Fishing, Inc.	
Hunters Offshore Enterprises, Inc.	
Jamie Marie, Inc.	
James Shones	
Lisa Melinda Fisheries, Inc.	
Lloyd Whaley	
Mark I, Inc.	
Marathon Fisheries, Inc.	
Marion Larkin	
Mark Cooper	
Miss Sue Fisheries, Inc.	
Miss Berdie, Inc.	
Muir Milach, Inc.	
Nicole Fisheries, Inc.	
North Sea, Inc.	
Pacific Draggers, Inc.	
Pacific Dawn, LLC	
Patience Fisheries, Inc.	
Pacific Future, LLC	
Ralph Brown	

Raven Enterprises, Inc. Yaquina Trawlers, Inc.	

III. Rationale For Proposed Allocation Alternatives

It has been argued that because our Nation's fishery resources belong to the general public,[9] the general public should receive the full economic benefit from fishery resources when they are rationalized. This result could be accomplished by a simple auction, which is authorized by the Magnuson-Stevens Act.[10]

If a large stock of cod were suddenly discovered off a remote U.S.-owned island in the Pacific ocean, and fishery managers wanted to privatize it, the Federal government would likely auction the rights to this undeveloped cod resource rather than allocate rights to vessel or processing plant owners based in California, Oregon or Washington state.

So why allocate fishing rights to private entities at all when the fish actually belong to the general public?

In a fully-capitalized, open-access fishery, where the harvest is controlled by a single quota the participants race to exploit, a portion of the investments in fishing vessels and processing plants that are specific to the fishery being rationalized and that are also relatively durable and non-malleable, will be lost as a result of the rationalization. This lost value re-appears in the value of the quota shares. Wealth is unavoidably transferred from the fixed capital of processing plants and fishing vessels to the owners of the quota.

When such a fishery is rationalized, owners of fishing boats and processing plants can suffer enormous financial losses. The amount of the loss depends upon the extent of the initial overcapitalization and the durability of the non-malleable capital involved. Owners of such capital can expect no return on their capital, regardless of finished product prices. During the transition between the open access and privatized fishery equilibrium conditions, 100% of the expected return on all of these non-malleable capital investments in primary processing and harvesting is actually *transferred* to the new quota owners. So if the government were to auction the rights to the whiting fishery, it would be auctioning not only the rights to the economic value of the fishery resource itself, but also most of the value of the existing private investments made to harvest and process that fishery resource!

Roughly based on the Pacific whiting fishery, the following is a hypothetical example to help demonstrate the impacts that rationalizing a fishery will have on owners of harvesting and processing capacity.

There are two basic types of investments made in the primary production of seafood: investments in harvesting capacity and investments in processing capacity.[11] Figure 1 is

an industry profile showing the hypothetical operating characteristics of the harvesting and processing sectors and the characteristics of the fishery they prosecute.

Figure 1. Basic Characteristics of the Fishery

Resource.

* Annual Quota (in metric tons)	100,000
* Potential (Biological) Season Length (in days)	180

Harvesting.

* Catch Capacity per Vessel (in MT per day)	70
* Variable Harvesting Cost (in $ per MT)	$70
* Capital Cost (per Vessel)	$2,000,000
* Interest Rate on Capital (also discount rate)	8%
* Depreciation of Harvesting Capacity (in years)	15
* Fish Price (in $ per MT)	$143.3

Processing.

* Processing Capacity per Plant in MT per day	350
* Variable Processing Cost (in $ per MT)	$235
* Capital Cost (per plant)	$10,000,000
* Interest Rate on Capital	8%
* Depreciation of Harvesting Capacity (in years)	15
* Finished Product Value (in $ per MT of round fish)	$451

In this hypothetical example a vessel is valued at two million dollars and has a fifteen-year depreciation. Harvesting costs include an estimated variable cost of seventy dollars per metric ton for necessities like labor, fuel and groceries. The daily harvesting capacity of a vessel is about 150,000 pounds (rounded to seventy metric tons) and the ex vessel price for the fish is $0.065 per raw pound or $143.30 per metric ton. Similarly, a processing plant is valued at ten million dollars and processes about 775,000 pounds of raw fish per day (rounded to 350 metric tons). The variable cost of items such as labor, utilities, packaging and finished product ingredients, is estimated to be about ten cents per raw pound of fish (or rounded to $235 per metric ton) processed at the plant.

One standard shore-based processing plant requires five vessels to maximize its productive capacity; thus, ten million dollars are invested in the plant and ten million invested in the five harvesting vessels, making the total capital investment in a harvesting and processing "unit" twenty million dollars.

This model shows how the fishery develops over time. Initially the fishery is unexploited. At the start of exploitation, initial entrants earn returns substantially above

market rates of return on investments, fueling additional investment. This investment continues until, on average, each participant is earning only a market rate of return on its investments. Figure 2 is an income statement for the first "unit" of fishing vessels and a processing plant to invest in the fishery in its first year of operation.

Figure 2. Combined Vessels and Plant Income Statement at Initial Stage of Industry Development in an Open Access Fishery

Harvesting Sector.

* Number of Vessels	5
* Total Investment in Vessels	$10,000,000
* Total Revenue (63,000 MT @ 143.3 per MT)	**$9,030,000**
* Costs	
- Variable Costs	$4,410,000
- Interest	$800,000
- Depreciation	$666,667
- Total Cost	**$5,876,667**
* Profit	**$3,153,333**
* Return on Investment	32%

Processing Sector.

* Number of Plants	1
* Total Investment in plants	$10,000,000
* Total Revenue (63,000 MT @ 451.6 per MT)	**$28,455,000**
* Costs	
- Raw Fish Purchases	$9,030,000
- Variable Costs	$14,805,000
- Interest	$800,000
- Depreciation	$666,667
- Total Cost	**$25,301,666**
* Profit	**$3,153,333**
* Return on Investment	32%

A thirty-two percent return on investment *will* attract additional investments into the open access fishery. During the development phase of the fishery, a balance in the returns earned by the harvesting and processing sectors is enforced by market conditions. If

harvesting capacity exceeds processing capacity, it will lead to reduced ex-vessel prices as vessel owners compete with one another for a processing market. This reduces the returns on fishing vessels and increases the returns on processing, thus discouraging further investments in fishing vessels and encouraging investments in processing capacity. The market thereby encourages equal returns on investments earned by each sector.

Additional investment will continue to occur so long as any economic profits are being earned. As new investments are made, the seasons are shortened, costs rise, and returns fall on all investments. When the rate of return falls to the market rate of return on capital investments, investment stops. Open access equilibrium has been reached. This condition is analogous to the current situation facing both the harvesting and processing sectors of the Pacific whiting fishery. In the model, the harvesting and processing operations shown in Figure 2 would reach an open access equilibrium in a 100,000 metric ton per year fishery with twenty-five vessels delivering to five standard processing plants in a season now reduced to fifty-seven days.

Figure 3. Combined Harvesters and Processors Income Statement at Equaliburim Condition in Open Access Fishery

Harvesting Sector.

* Number of Vessels	25
* Total Investment in Vessels	$50,000,000
* Total Revenue (100,000 MT @ 143.3 per MT)	**$14,333,333**
* Costs	
- Variable Costs	$7,000,000
- Interest	$4,000,000
- Depreciation	$3,333,333
- Total Cost	**$14,333,333**
* Profit	$0
* Return on Investment	0%

Processing Sector.

* Number of Plants	5
* Total Investment in Plants	$50,000,000
* Total Revenue (100,000 MT @ 451.6 per MT)	**$45,166,666**
* Costs	
- Raw Fish Purchases	$14,333,333
- Variable Costs	$23,500,000

- Interest	$4,000,000
- Depreciation	$3,333,333
- Total Cost	**$45,166,666**
* Profit	$0
* Return on Investment	0%

Under open access equilibrium, shown above in Figure 3, both harvesting and processing sectors are covering all costs, yet neither sector is earning economic rent from the resource. (Individual operators may be receiving quasi-rents because of their fishing skills, plant locations or marketing skills, etc.)

Fishery managers use the phrase "over-capitalized" to describe the capital invested in harvesting and processing fishery resources in an open access equilibrium condition. One commentator has even characterized those who have made these investments as "part of the problem" because of their "racing, over-capitalizing, excessively entering" the fisheries.[12] But these characterizations are wrong. The capital invested in the open access fishery is, on average, making a market rate of return. *In fact, the capital invested in the fishery is completely appropriate for an open access managed fishery. The fishery is only "over- capitalized" in comparison to the amount of capital required if the fishery were rationalized.*

From the viewpoint of society as a whole, if this hypothetical open access fishery were rationalized, it would be utilized just as effectively by eight vessels, delivering to one-and-one-half standard processing plants, 180 days of the year. This would result in the elimination of capital and depreciation costs for an annual savings (over the open access equilibrium) of $10,010,581. The 100,000 metric ton fishery would generate slightly over $100 per metric ton of economic rent that did not exist in the open access fishery. This is the primary economic benefit of rationalization. Figure 4 shows the fishery after it has reached the rationalized equilibrium point.

Figure 4. Combined Harvesters and Processors Income Statement at Equilibrium Condition in a Rationalized Quota Based Fishery

Season Length.	180 days
Harvesting Sector.	
* Number of Vessels	8
* Total Investment in Vessels	$15,873,015
* Total Revenue (100,000 MT @ 193.39 per MT)	**$19,338,624**
* Costs	

- Variable Costs	$7,000,000
- Interest	$1,269,841
- Depreciation	$1,058,201
	$10,010,584
- Total Cost	**$19,338,624**
* Profit	**$0**
* Return on Investment	0%

Processing Sector.

* Number of Plants	5
* Total Investment in Plants	$50,000,000
* Total Revenue (100,000 MT @ 451.6 per MT)	**$45,166,666**
* Costs	
- Raw Fish Purchases	$19,338,624
- Variable Costs	$23,500,000
- Interest	$1,269,841
- Depreciation	$1,058,201
- Total Cost	**$45,166,666**
* Profit	**$0**
* Return on Investment	0%

Quota Share Holder Sector.

* ***Income (Pure Profit)***	***$10,010,581***

A comparison between open access equilibrium and private property equilibrium conditions shows the benefit that is expected from fishery rationalization. In an open access fishery, society receives $45,166,000 worth of fishery products in exchange for $45,166,000 worth of resources. In a rationalized fishery, society receives $45,166,000 worth of fishery products in exchange for only $35,156,000 worth of resources.

All of the economic rent resulting from rationalization is captured by quota share holders. At first glance, the fact that owners of fishing vessels and processing plants do not receive any rent from the fishery does not appear to be a problem. After all, vessel and plant owners were not receiving any economic rent under open access equilibrium conditions either. But in a fully capitalized open access fishery the owners of the fishing vessels and processing plants would suffer enormous losses during the transition between the open access and privatized fishery equilibrium conditions.

This is how those losses occur: A quota holder wishes to lease his quota for a year. A number of vessel-owning firms compete to lease the quota. In order for a vessel-owning firm to make a bid, it must know the price it will receive for the harvested fish. Each vessel-owning firm offers to deliver the harvested fish to a number of processing companies, who compete to buy the raw fish. The processing companies face a situation where any price above that which covers their variable cost is preferable to the only alternative, which is leaving their plant idle. The price that a processing company will offer is analogous to the price a one hundred dollar bill would receive in an auction. As long as the current offer allows for any return above variable cost, a processing company will make a higher offer. In the end, the price will be infinitesimally close to that which covers only the variable cost of processing the fish.[13] The vessel-owning firm is therefore capable of securing processing services at the variable cost of those services.

The vessel-owning firms, armed with the commitment from processing companies, begin negotiations with the quota holder. In negotiations, the vessel-owning firms find themselves in exactly the same position that the processing companies faced when negotiating the raw fish price. As long as the most recent offer for quota allows for any revenue in excess of that needed to cover variable costs, all rational vessel-owning firms will offer a higher price. Inevitably the price paid for the quota by the vessel-owning firm will allow it only to cover its variable costs.

The excess processing capacity caused the processing companies to forgo any return on their investments when they bargained for the purchase of raw fish. The vessel owning firms, because of the excess fishing capacity, will inevitably bargain away any return on their own capital investments, along with the price concessions they were able to extract from processing companies. The quota holder thus collects all the return on the capital of both the vessel and plant owners.

In the model, therefore, the quota holder would be able to generate $147 in net revenue from each metric ton of fish, or approximately $47 per metric ton more than the quota holder would be able to generate once the fishery reached the rationalized equilibrium state.

This $47 per metric ton is, in effect, a direct transfer from the owners of fishing vessels and processing plants to the holder of quota. Immediately after the rationalization system is in place, those who are allocated quota receive, along with the fishing rights and the corresponding economic rent from the fishery, the right to expropriate the value of investments made by vessel and processing plant owners!

Figure 5. Combined Harvesters and Processors Income Statement During Transition Phase Between the Open Access Equilibrium Condition and the Rationalized Quota Based Fishery Equilibrium Condition

Season Length.	180 days
Harvesting Sector.	
* Number of Vessels	25
* Total Investment in Vessels	$50,000,000
* Total Revenue (100,000 MT @ 216.67 per MT)	$21,666,666
* Costs	
- Variable Costs	$7,000,000
- Interest	$4,000,000
- Depreciation	$3,33,333
	$14,666,666
- Total Cost	$28,999,999
* Profit	**($7,333,333)**
* Return on Investment	(14.6%)
Processing Sector.	
* Number of Plants	5
* Total Investment in Plants	$50,000,000
* Total Revenue (100,000 MT @ 451.6 per MT)	$45,166,666
* Costs	
- Raw Fish Purchases	$21,666,666
- Variable Costs	$23,500,000
- Interest	$4,000,000
- Depreciation	$3,333,333
- Total Cost	$52,499,999
* Profit	**($7,333,333)**
* Return on Investment	(14.6 %)
Quota Share Holder Sector.	
* ***Income (Profit)***	***$14,666,666***

During the transition period between open access and rationalized equilibrium conditions, nearly a third of the annual income received by quota share holders is *a direct expropriation of wealth* from those who have invested in harvesting and processing capacity! It is a transfer from owners of harvesting and processing equipment to those who receive allocations of quota.

The magnitude of the losses the harvesting and processing sectors should expect, as a percentage of total investment, will depend upon the relative amount of overcapitalization. In other words, the more excess capital drawn into the fishery during open access, the harder rationalization will be on the owners of that capital, regardless of when any particular investment was made.

In the model, the fishery reached open access equilibrium at a capitalization ratio of 3.2. This means that after the transition period, when the long-run rational capitalization level is reached, 68% (100%-32%) of the capital will disappear in the form of an uncompensated loss to the industry. This point should be emphasized. *If the transition period between open access and rationalized equilibrium conditions were somehow instantaneous, fishing vessel and processing plant owners would lose 68% of the value of their capital investments after the fishery was rationalized.* This 68% loss in wealth is the very lower limit on the losses that investors in the harvesting and processing sectors could suffer.

But the transition period is not instantaneous: When an open access fishery is rationalized, fishing vessel and plant owners will not start earning income on their capital investments until the "surplus" capacity is no longer physically available to participate in the fishery.

The length of the transition period is therefore a critical factor in determining the loss facing processing plant and fishing vessel owners. The longer the transition period lasts, the lower the present value of the return on the 32% (in the hypothetical model) of the capital that is appropriate to a rationalized fishery.

The length of the transition period is a function of only two things:

1. The amount of "overcapitalization" in the harvesting and processing sectors at the start of rationalization. This determines how much capacity must physically leave the fishery before the rationalized equilibrium condition is reached; and

2. The rate at which harvesting and processing equipment physically leaves the fishery after it is first rationalized. In other words, the "malleability and durability" of the harvesting and processing equipment.

Under open access conditions, as fishing and processing equipment wears out, it is replaced with major (as opposed to routine) maintenance expenditures; therefore, the capacity remains constant. When the quota system is imposed, however, the marginal value of fishing or processing capacity is zero, so expenditures to maintain this excess

capacity will not occur. Eventually harvesting and processing equipment will wear out and no longer be available. In the model, we assume that harvesting and processing capacity falls by 6.7% annually during the transition period. Given that there is just a little over three times the rational level of capacity at the onset of the program, the transition period lasts seventeen years in the model.

The transition period may be longer than seventeen years. Harvesting and processing equipment is quite durable and the transition period does not depend upon whether or nor the equipment is actually used in the fishery. As long as there is excess equipment available which can potentially participate in the fishery, it prevents equipment in use from earning any return.

Figure 6. Economic Impact of Rationalization by Sector

Sector	Change in Discounted[14] Value of Earnings During Transition Period	Original Value of Capital Investment	Value of Investments When Fishery is First Rationalized	Percentage of Value That Investment Losses When Fishery is Rationalized
Harvesting	-45,810,000	$50,000,000	$4,190,000	91.6%
Processing	-45,810,000	$50,000,000	$4,190,000	91.6%

Under the model, assuming a transition period of seventeen years, on the day rationalization is implemented, 91.6% of the value of fishing vessels and processing plants will be taken from its owners.

IV. How the Proposed Alternatives Address the Expropriation Suffered by Owners of Fishing Vessels and Processing Plants

Allocating quota to owners of fishing vessels that are members of cooperatives that are required to deliver their catch to a particular processor.

This proposal would allocate quota to vessel owners, who are then required to deliver their catches to the processing plants to whom they historically have sold their fish. The intention is that both the vessel and the processing plant retain their historical throughput of product and each remains whole after the implementation of rationalization.

There are two serious problems with this proposal: First, the degree in which a processor's throughput is protected is based on the strength of the "linkage" between the vessel and the plant. To the degree a vessel can leave and deliver its catch elsewhere, the processor could have the value of its plant expropriated by the vessel owner who receives allocations of quota.

Second, the cooperative proposal, at best, creates a bilateral monopoly. A bilateral monopoly arises when a monopolistic seller[15] deals exclusively with a monopsonistic buyer. In this case, the vessel owner has a monopoly on the sale of a certain amount of fish and the processor has a monopsony on the purchase of a certain amount of fish.

Bilateral monopolies are rare because price under a bilateral monopoly is indeterminate. (This price instability is a source of problems with the "two-pie" system found in crab rationalization.) The price that is established has to be determined outside of the traditional method of supply and demand. As Nobel Prize-winning economist George Stigler noted: *in a bilateral monopoly, price will be determined by things such as "skill in negotiation; public opinion; coin flipping; a wise marriage. The difficulty in naming interesting examples of bilaterally monopoly arises because it is an unstable form of organization: only the trading between a monopsonist employer and an all-inclusive labor union is likely to survive as an example."*[16]

For the above reasons, the proposed alternative of allocating quota to fishing vessel owners who are members of "cooperatives" required to deliver to a particular processor does not necessarily protect owners of vessels or plants.

Allocating harvesting quota to fishing vessel owners and the owners of whiting processing plants.

Since the value of fishing vessels and processing plants is transferred from their owners to the holders of quota when a fishery is rationalized, a simple way to assure such owners are compensated is to allocate quota shares to both owners of fishing vessels and owners of processing plants. Indeed, this is the only rationale under which either fishing vessel or processing plant owners can justify receiving allocations of the public's fishery resources. This proposal would still transfer the value of fishing vessels and processing plants from the vessel and plant owners to quota share holders, but it would ensure that the quota share holders and vessel and plant owners were one and the same, thereby avoiding the expropriation of their wealth.

At the March 2007 meeting of the Pacific Council, Professor James Wilen expressed the opinion that it may be inappropriate to allocate quota to investors in the whiting industry. He believed rationalization would cause only a small loss in the value of the capital invested in the whiting fishery. Professor Wilen noted that the decrease in value of capital that is suddenly surplus to the fishery's needs depends upon that capital's "next best alternative use," which might be nearly equal in value to its current use.[17]

An examination of the value of surplus fishing vessels and processing plants, however, shows how *little* they will be worth in their "next best alternative use."

There are few financially viable places for a fishing vessel to move. The most obvious region for a fishing vessel to enter is Alaska. The Alaska fisheries, however, are all

already in an open access equilibrium condition. The groundfish fisheries in Alaska are also under a license limitation program; any new entrant is required to purchase a license. The Bering Sea pollock fishery is closed to any new fishing vessels entering the fishery as a result of the American Fisheries Act. The largest demand for vessels in Alaska is for salmon tender vessels, but a vessel operating exclusively as a tender vessel has limited value.

It is clear that a whiting fishing vessel would greatly decrease in value if the fishery were rationalized, but there is no accurate data on what its next best alternative use would be. We have been told that a surplus whiting fishing vessel could be used for salmon tendering or, if it were especially well maintained, as a replacement for an already existing fishing vessel working in Alaska. Vessel owners we have spoken with believe that if the whiting fishery were rationalized, a whiting trawler without quota would be worth something in the "low hundreds of thousand dollar level."

In contrast to fishing vessels that can simply be moved to different regions, shore-based processing plants are stationary. But as Professor Wilen noted, much of the used equipment in a shore-based plant has some value, even if it is not used in the whiting fishery. Equipment removal and disposal costs, however, must also be considered to determine the net value of a shore-based plant's used equipment.

Figure 7 is a detailed estimate of the "next best alternative use" for a shore-based whiting plant, using equipment actually found in a whiting plant.

Figure 7. "Next Best Alternative Use" Value of a Shore-Based Whiting Plant

Production of Primary Product:

Offloading/Fishing Holding Component —

Equipment	Costs New	Removal Cost	Sale Value of Used Equip.	Scrape Value of Used Equip.	Disposal Costs	Net Value of Used Item
Fish Pumps	$60,000	$2,000	$30,000			$28,000
Crane	$20,000	$3,000	$5,000			$2,000
3500 Ft3 RSW Tanks	$200,000	$20,000		$10,000		-$10,000
RSW Pumps/Chillers	$250,000	$10,000	$20,000			$10,000
Conveying Equip.	$120,000	$15,000		$10,000		-$5,000
Foundations	$50,000	$5,000		$2,000		-$3,000
Catwalks	$20,000	$5,000		$1,000	$1,000	-$5,000
Electrical	$50,000	$10,000			$2,000	-$12,000
Controls	$20,000	$2,000			$200	-$2,200
Subtotal	$790,000	$72,000	$55,000	$23,000	$3,200	$2,800

Filleting Equipment Component —

Equipment	Costs New	Removal Cost	Sale Value of Used Equip.	Scrape Value of Used Equip.	Disposal Costs	Net Value of Used Item
4 x Baader 182	$1,000,000	$20,000	$160,000			$140,000
4 x Baader 51	$200,000	$4,000	$60,000			$56,000
4 x Candeling Table	$100,000	$4,000		$5,000		$1,000
Sorting Equipment	$75,000	$10,000		$5,000		-$5,000
Raw Fish Handeling Ec	$100,000	$10,000		$15,000		$5,000
Fillet Handeling Eq.	$20,000	$2,000		$15,000		$13,000
Offal Handeling/Storage	$150,000	$30,000		$20,000		-$10,000
Fillet Packing Tables	$50,000	$5,000		$10,000		$5,000
Fillet Frames	$75,000	$500	$7,500			$7,000
Electrical	$100,000	$10,000			$5,000	-$15,000
Controls	$30,000	$500			$500	-$1,000
Subtotal	$1,900,000	$96,000	$227,500	$70,000	$5,500	$196,000

Surimi Line Component —

Equipment	Costs New	Removal Cost	Sale Value of Used Equip.	Scrape Value of Used Equip.	Disposal Costs	Net Value of Used Item
3 x Baader 695	$270,000	$3,000	$90,000			$87,000
2 x Ratio Tanks	$30,000	$2,000		$1,000		-$1,000
3 x Duble Stack Screen	$120,000	$3,000		$1,500		-$1,500
4 x Wash Tanks	$60,000	$4,000		$2,000		-$2,000
2 x Fukoku 450 Ref.	$180,000	$8,000		$2,600		-$5,400
6 x Fukoku 5m scr. pr.	$540,000	$30,000		$7,800		-$22,200
3 x Flotweig Decanters	$1,200,000	$30,000	$60,000			$30,000
Presscake Handling Eq.	$120,000	$2,000		$2,000		$0
2 x Ishita Autoblender	$600,000	$2,000	$20,000			$18,000
2 x Extruders	$100,000	$1,000	$20,000			$19,000
15 x PD Pumps	$300,000	$7,500	$7,500			$0
Process Piping	$150,000	$2,000		$6,500		$4,500
Electrical	$130,000	$10,000			$2,000	-$12,000
Controls	$160,000	$5,000			$1,000	-$6,000
Catwalks/Foundations	$50,000	$20,000		$10,000	$4,000	-$14,000
Subtotal	$4,010,000	$129,500	$197,500	$33,400	$7,000	$94,400

Refrigeration Component —

Equipment	Costs New	Removal Cost	Sale Value of Used Equip.	Scrape Value of Used Equip.	Disposal Costs	Net Value of Used Item
Blast Freezer	$120,000	$15,000			$2,000	-$17,000
10 x Plate Freezers	$600,000	$40,000			$5,000	-$45,000
Freezer Conveyors	$100,000	$50,000	$50,000			$0
Refirg. Compressors	$40,000	$5,000			$5,000	-$10,000
Condensors	$60,000	$15,000	$60,000		$2,000	$43,000
Recievers	$50,000	$10,000			$2,000	-$12,000
Subtotal	$970,000	$135,000	$110,000	$0	$16,000	-$41,000

Structure and Utilities Component —

Equipment	Costs New	Removal Cost	Sale Value of Used Equip.	Scrape Value of Used Equip.	Disposal Costs	Net Value of Used Item
Hydraulics	$75,000	$15,000			$8,000	-$23,000
Water	$150,000	$20,000	$30,000			$10,000
Electrical	$180,000	$15,000		$5,000		-$10,000
Plumbing	$220,000	$40,000				-$40,000
Waste Water Treatment	$350,000	$15,000		$10,000		-$5,000
Structure	$600,000	$275,000			$150,000	-$425,000
Vehicles/Forklifts	$200,000		$50,000			$50,000
Office Equipment/Tools	$100,000		$10,000			$10,000
Laboratory	$60,000		$6,000			$6,000
Spare Parts	$250,000		$25,000			$25,000
Subtotal	$2,185,000	$380,000	$121,000	$15,000	$158,000	-$402,000

Subtotal for all of the Used Equipment From Primary Production = -$149,800.

Production of Fish Meal:

Offal Handling and Storage Component —

Equipment	Costs New	Removal Cost	Sale Value of Used Equip.	Scrape Value of Used Equip.	Disposal Costs	Net Value of Used Item
Truck Dump	$20,000	$10,000		$2,000		-$8,000
2 x Offal Tanks	$80,000	$10,000		$2,000		-$8,000
Lamella 350/90 Pump	$70,000	$5,000	$10,000			$5,000
4 x Screw Conveyors	$60,000	$10,000	$5,000			-$5,000
Subtotal	$230,000	$35,000	$15,000	$4,000	$0	-$16,000

Cooking Component —

Equipment	Costs New	Removal Cost	Sale Value of Used Equip.	Scrape Value of Used Equip.	Disposal Costs	Net Value of Used Item
Feed Conveyor	$35,000	$5,000	$10,000			$5,000
Feed Hopper	$20,000	$5,000		$2,000		-$3,000
Cooker	$250,000	$30,000	$25,000			-$5,000
Straining Conveyor	$30,000	$2,000		$1,000		-$1,000
Strainer Tank	$15,000	$1,000		$1,000		$0
Subtotal	$350,000	$43,000	$35,000	$4,000		-$4,000

Pressing Component —

Equipment	Costs New	Removal Cost	Sale Value of Used Equip.	Scrape Value of Used Equip.	Disposal Costs	Net Value of Used Item
Atlas NP150 Press	$325,000	$50,000	$25,000			-$25,000
3 x Press Water Tank	$60,000	$2,000	$2,000			$0
Hasher	$20,000	$1,000	$3,000			$2,000
Feed Conveyor to Dryer	$25,000	$2,000	$5,000			$3,000
Subtotal	$430,000	$55,000	$35,000	$0	$0	-$20,000

Drying/Bagging Component —

Equipment	Costs New	Removal Cost	Sale Value of Used Equip.	Scrape Value of Used Equip.	Disposal Costs	Net Value of Used Item
Dryer	$550,000	$125,000	$25,000			-$100,000
9 x Screw Conveyors	$135,000	$18,000	$9,000			-$9,000
Meal Cooler	$60,000	$10,000		$2,000		-$8,000
Vibra Screen	$12,000	$2,000	$3,000			$1,000
Hammer Mill	$50,000	$5,000	$10,000			$5,000
2 x Bag Filters	$25,000	$5,000	$5,000			$0
2 x Bagging Machine	$20,000	$5,000	$2,000			-$3,000
Subtotal	$852,000	$170,000	$54,000	$2,000	$0	-$114,000

Liquid Component —

Equipment	Costs New	Removal Cost	Sale Value of Used Equip.	Scrape Value of Used Equip.	Disposal Costs	Net Value of Used Item
3 x Alfa Laval Decanter.	$60,000	$35,000	$45,000			$10,000
2 x Alfa Laval Separato	$560,000	$25,000	$80,000			$55,000
Alfa Laval 207 Polisher	$90,000	$5,000	$10,000			$5,000
6 x Process Pumps	$140,000	$12,000	$12,000			$0
5 x Process tanks	$150,000	$10,000		$4,000		-$6,000
4 x Falling Film Evap.	$450,000	$40,000	$50,000			$10,000
Subtotal	$1,450,000	$127,000	$80,000	$4,000	$0	$74,000

Air Quality Control Component —

Equipment	Costs New	Removal Cost	Sale Value of Used Equip.	Scrape Value of Used Equip.	Disposal Costs	Net Value of Used Item
Air Scrubbers	$200,000	$30,000		$10,000		-$20,000
Ducting/Piping	$70,000	$20,000		$5,000		-$15,000
Salt water Supply/ Discharge	$30,000	$20,000		$2,000		-$18,000
Subtotal	$300,000	$70,000	$0	$15,000	$0	-$53,000

Building, Internal Structure and Utilities Component —

Equipment	Costs New	Removal Cost	Sale Value of Used Equip.	Scrape Value of Used Equip.	Disposal Costs	Net Value of Used Item
Equipment Footings	$150,000	$30,000			$3,000	-$33,000
Equipment Foundations	$450,000	$60,000		$15,000		-$45,000
HP Boiler	$400,000	$20,000	$50,000			$30,000
Steam Piping	$40,000	$5,000		$2,000		-$3,000
Water Piping	$20,000	$3,000			$1,000	-$4,000
Electrical	$550,000	$60,000			$5,000	-$65,000
Controls	$450,000	$5,000			$3,000	-$8,000
Ventilation	$250,000	$20,000		$5,000		-$15,000
Structure	$600,000	$400,000			$200,000	-$600,000
Subtotal	$2,910,000	$603,000	$50,000	$22,000	$212,000	-$743,000

Subtotal for all of the Used Equipment From Meal Plant = -$876,000

Total value of used equipment from a shore-based whiting plant = -$1,025,800.

It would cost slightly over a million dollars *more* to dismantle a shore-based whiting plant and remove its equipment than the used equipment is worth. This should not be a

surprise. Consider an average residential home: The home has many used items which can be sold, such as a furnace, refrigerator, dishwasher and the like. But the costs of dismantling the home and disposing of all the ruined sheetrock, shingles, siding and insulation would far exceed any current value the used items may still retain.

In summary, the value of whiting fishing vessels would be very low in their "next best alternative use." There is a very limited market for these fishing vessels. Unlike fishing vessels, a shore-based whiting processing plant cannot move to a new location. A shore-based plant's "next best alternative use" would be to sell its used equipment. But used equipment has a limited market, and the costs required to de-construct a shore-based plant and remove its equipment would exceed the value of the equipment. Therefore, the decrease in value of capital invested in fishing vessels and processing plants that would result from rationalization of the whiting fishery should be compensated through the allocation of quota to owners of fishing vessels and plants as that capital's "next best alternative use" is not close to being equal in value to its current use.

IV. Conclusion

Rationalization of Pacific whiting will result in more efficient utilization of this resource, regardless of who receives quota. Moreover, the goals and objectives set by the Pacific Council will be achieved no matter how the quota is allocated. The issue then becomes this: Why would any private entity be allocated quota of Pacific whiting when the government owns the resource and the general public can receive the full benefits of rationalization through a simple auction? The rationale for allocating quota to private entities is that the owners of whiting fishing vessels and whiting processing plants will lose most of the value of their investments to quota holders when the fishery is rationalized. Owners of fishing vessels and processing plants therefore must receive allocations of whiting quota so that the tens of millions of dollars they have invested in developing the fishery will not be expropriated.

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* These comments are taken from a paper the authors wrote in 1991 regarding the pollock fishery in Alaska.

[1] "Rationalization" is a euphemistic word for "privatization." In this paper we define "rationalization" as "privatizing the privilege to utilize fishery resources."

[2] Pub. L. 109-479 (2007).

[3] Pub. L. 109-479, sec. 302(f) [uncodified].

[4] Professor Daniel W. Bromley asserts that the "claim that IFQ programs offer 'market-based' allocations of harvest quota is patently false" because fishery resources are already

owned by the federal government. Mr. Bromley notes that when the Magnuson-Stevens Act became law in 1976, it gave the United States ownership of fishery resources within the 200-mile exclusive economic zone. Bromley then states, "[s]ince the transition period [from open access to privatized equilibrium conditions] already happened almost 30 years ago, it is curious that the fisheries literature has failed to acknowledge the flawed presumption that no one owns the fish until they have been captured." Bromley, *Purging the frontier from our mind: Crafting a new fisheries policy*, 15 Reviews in Fish Biology and Fisheries, p. 218 (2005). (Hereinafter, "Bromley") The mere fact that the government has ownership over an item does not mean that the utilization of that particular item will be market-based, however. The government in the Soviet Union, for example, owned the means of production in communist Russia. But the utilization of that means of production was based on politics, not on the free market. Similarly, the United States government owns fishery resources with the 200-mile exclusive economic zone but, in an open access fishery, utilization of those resources is based on a race to harvest and process the fish, and not a market-based approach.

[5] 40 C.F.R. §1502.16.

[6] We believe that limited entry permit holders to be a surrogate for vessel owners. To the degree this is not the case, there are two issues that should be considered. Permits issued by the government are technically a privilege and subject to revocation without compensation. To the degree permit holders are not also the owners of the fishing vessel, there is a serious risk that the fishing vessel owner will have the value if its investment expropriated.

[7] This paper focuses exclusively upon the shore-based Pacific whiting fishery.

[8] The only rationalization scheme to award allocations of harvesting privileges to "fishermen" was the crab rationalization program in the North Pacific, which allocated three percent of the rationalized crab harvest to captains who worked on fishing vessels.

[9] The United States claims sovereign rights over all fish within the United States exclusive economic zone. 16 U.S.C. §1811(a).

[10] The recently enacted amendments to the Magnuson-Stevens Act allows for auctions. The legislation states: "In establishing a limited access privilege program, a Council shall consider, and may provide, if appropriate, an auction system or other program to collect royalties for the initial, or any subsequent distribution of allocations in a limited access privilege program..." 16 U.S.C. §1853a.

[11] Fish are highly perishable before being processed into a primary product. Investors in fishing vessels and primary processing capacity have made those investments based on the requirement that fish be handled quickly, i.e. these investors have invested in the "race to fish" caused by the open access fishery management regime. Investors in

secondary processing of seafood, on the other hand, have not made their investments based upon the "race to fish" caused by open access. Secondary processors have not overcapitalized as a result of the existing management regime and will not be adversely impacted, therefore, by the privatization of fishery resources. Being that secondary processors are consumers of processed seafood, their investments may benefit if the utilization of fishery resources is increased through privatization.

[12] Bromley, p. 221.

[13] See, Herbert Hovenkamp, Enterprise and American Law 1836-1937, (1991), p. 143. Hovenkamp describes the situation where a second railroad enters a previously profitable market. "They will begin cutting prices in order to steal business from one another. Any price above operating (variable) costs is 'profitable' in the sense that it covers the direct costs of shipping and contributes something to the amortization of fixed costs. ... even though it is not nearly enough to cover all its costs."

[14] In the model a discount rate of 8% was used. This discount rate is higher than that normally used in cost benefit calculations for such things as public works projects. The reason why the higher discount rate was used was to reflect the higher uncertainty in the level and duration of the benefit stream that exists in fisheries, when compared to, for example, a bridge. The 8% was chosen as a round number within the range of the discount rate that can be derived from lease transactions and sales transactions in the Dock Street Brokers quota sales web site.

[15] But for the fact they are established by governmental action, the creation of an Individual Fishing Quota system that allocates an exclusive right to harvest a particular percentage of a fishery to specific fishermen is a clear violation of the antitrust laws. Even under the antitrust exemption granted by the Fishermen's Collective Marking Act of 1936, a group of fishermen would be in violation of antitrust laws if they attempted to exclude others from participating in a particular fishery.

[16] George Stigler, The Theory of Price, 4th Edition (1987), p. 215.

[17] March 2007 Powerpoint presentation by Professor James Wilen, Department of Agric. & Resource Economics, University of Californa, Davis, before the Pacific Fishery Management Council. Professor Wilen focused his comments only on the processing sector, but the issue is relevant for owners of both fishing vessels and processing plants.

C-3(b)

City of Adak
Incorporated
April 2001

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September 28, 2007

Chris Oliver
Executive Director
North Pacific Management Council
605W 4th Ave Suite 306
Anchorage, Alaska 99501

Re: Adak Fisheries Letter re: Custom Processing RIR/IRFA and Crab 18 month review

Dear Chris and Council Members,

This is a letter of support of Adak Fisheries LLC (AF) letter to the Fishery Management Council dated September 26, 2007.

As one of Alaska's newest communities, we have had our share of growing pains. This community has been hardest hit by Crab Rationalization. Though there are a lot of good qualities with this program, it seems that little concern was made about the community of Adak when developing.

Historically, the city has enjoyed an average landing of Western Aleutian Golden Brown King Crab of 1.8 million pounds between the years 2001-2005. That equals to $145,000.00 per year of taxes for the City of Adak at an average price of $2.70 per pound. The last two seasons, 2005/2006 and 2006/2007 Adak as only landed 676,000lbs. That gave the City of Adak a tax base of $42,000 for those two years combined at an average price of $2.12 per pound. As you can imagine, this is a huge loss to a small community.

It doesn't stop on the city level. There are many small mom and pop businesses that are affected too. These businesses have come to depend on those seasonal customers such as fishing vessels that come to Adak and use the communities' services.

The City and community of Adak is asking that the Council will consider A/F proposal and understand that their decision effects more than just our local processor, but everyone working and living in our small community.

I thank you for your time in reviewing this matter.

Sincerely,

Steven L. Hines
City Manager

C-3(b)

Alaska Crab Coalition
3901 Leary Way N.W. Suite #6
Seattle, Washington 98107
206.547.7560
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acccrabak@earthlink.net

October 2, 2007

Chris Oliver, Executive Director
North Pacific Fishery Management Council
605 West 4th Avenue, Suite 306
Anchorage, AK 99501-2252

RE: Preliminary Comments, Agenda Item C-3, Crab Fishery Management (b), (c), (d), (e)

(b) Committee report-discussion paper on BSAI Crab "B" shares:

- During the development of the BSAI crab program, the ACC position on the A/B share split was 80/20, and the ACC agreed to let the NPFMC make that decision.
- ACC continues to support the BSAI crab rationalization program and notes that it is a sound basic framework upon which to build a much stronger and more robust crab industry; and that it is working well for all sectors.
- ACC reiterates its position from April 2007, that with less than two years of fishery data compiled and available to the public in regards to B share allocative issues, the ACC supports closing out the 18 month review at this meeting.
- ACC recommends B share allocative issues be fully addressed in the comprehensive three year review which will be initiated in the spring of 2008.

(c) BSAI Crab "C" share 90/10 exemption: ACC supports allowance of C shares to remain open-access shares, without regional designation and A and B share splits. ACC also supports extension of the three year sunset date on leasing of C shares.

(d) BSAI crab custom processing cap exemption:
Fisheries and Regions:
Custom processing will be exempt from use caps in the following regions and fisheries:

- The North region of the Bering Sea C. opilio fishery
- The Western Aleutian Islands golden king crab fishery; suboption West region only
- The Western Aleutian Islands red king crab fishery
- The Eastern Aleutian Islands golden king crab fishery
- The St. Matthew Island blue king crab fishery; suboption, North region only
- The Pribilof Islands red and blue king crab fishery, suboption, North region only

Definition of custom processing exemption: Option 1) Physical processing of crab at a facility owned by an entity does not count toward the cap of the entity (only processor share holdings count toward an entity's cap).

Locations qualified for the exemption: No comment at this time, awaiting industry comments at this meeting.

Facility cap

Outside of the West region, no facility may process more than 60% of

a) EAI golden king crab
b) WAI red king crab

Provisions to protect interests of the community of origin: Either option 1 or 2.

(e) BSAI Crab post-delivery transfers: Alternative 2, Unlimited post-delivery transfers, the analysis indicates that only a few persons have encountered overages, it is unlikely that there will be a significant increase in the provisions. For clarity, the Council should consider including a specific provision in Alternative 2 specifying that a person cannot begin a trip without unused IFQ. Alternative 3 already contains such a provision.

Arni Thomson
Executive Director

Plesha
C-3(b)

Petition for Emergency Legislation

Fax to Gary Painter @ (541) 574-0380.

U.S. Senator Ted Stevens
United States Senate
Washington, DC

U.S. Senator Slade Gorton
United States Senate
Washington, DC

Gentlemen,

By October 1, 2000, please pass Congressional legislation that:

1. exempts the North Pacific Fishery Management Council from any extension of the Magnuson-Stevens Act's ITQ moratorium in the BSAI crab fishery.

2. authorizes the NPFMC to adopt by September 1, 2001, individual <u>fishing</u> quotas (IFQ's) for BSAI crab fishermen at the rate of 100% of the qualifying years, and individual <u>processing</u> quotas (IPQ's) for BSAI crab processors at the rate of 80-90% of the qualifying years. The final IPQ percentage TO be decided by Senators Stevens and Gorton. (Both IFQ's & IPQ's based on <u>live</u> crab poundage).

3. authorizes the NPFMC to determine the qualifying years for IFQ's and IPQ's, as soon as possible, based on the Council's Amendment 10 recency requirement. (At least one crab landing in any BSAI crab fishery in 1996 or 1997 or before February 7, 1998.)

4. authorizes a $100-million buyback of final, non-interim BSAI crab licenses with $50-million to be paid back by the crab fleet over 30-years on a per-live-pound-delivered basis, not to exceed 5% of each fish ticket's value.

Without this legislation, the Bering Sea crab fleet is doomed to wide spread bankruptcy over the next several years that will harm many families and communities throughout Alaska and the Pacific Northwest.

Gary Painter | New Venture | 9/1/00
Owner | Crab Vessel | Date

PO Box 1027 Newport, OR 97365 | 541/574-0256
Address | Phone

Attachment 3

Without this legislation, the Bering Sea crab fleet is doomed to wide spread

Owners who have signed petition. *Bold Type Indicates Aleutian Islands Brown Crab LLP Qualified

No.	Name	Vessel	Address	City	State	Zip	Phone
1	LFK, Inc.	Adventure	PO Box 1147	Petersburg	AK	99833	907-772-4294
2	Ninilchik Ltd. Partnership	Alicia Jean	12000 Industrial Way N3	Anchorage	AK	99515	907-344-5856
3	Leonard Herzog	Anna Marie	903 Delaney St.	Anchorage	AK	99501	907-277-6150
4	CL Lowenberg	Arctic Lady	PO Box 767	Kodiak	AK	99615	907-486-4452
5	William E. Jacobson	Atlantico	PO Box 69	Kodiak	AK	99615	907-486-0881
6	Sagaka Fishing-Gary Edwards	Big Valley	PO Box 8101	Kodiak	AK	99615	907-486-3603
7	Evening Star Inc.	Commodore	PO Box 1147	Petersburg	AK	99833	907-772-4294
8	David Wilson	Destination	Box 273	Sand Point	AK	99661	907-383-3755
9	Raymond Bellamy	Farrar Sea	62084 Skyline Drive	Homer	AK	99603	907-235-8930
10	**Obsession Ltd. Partnership**	**Handler**	**12000 Industrial Way N3**	**Anchorage**	**AK**	**99515**	**907-344-5856**
11	St. George Marine, Inc.	Jennifer A.	2125 2nd Ave	Ketchikan	AK	99901	
12	David Wilson	Keta	Box 273	Sand Point	AK	99661	907-383-3755
13	Frank Danner	Lady Ann	PO Box 92729	Anchorage	AK	99509	907-261-7600
14	David Wilson	Lady Joanne	Box 273	Sand Point	AK	99661	907-383-3755
15	Yukon Delta Fisheries	Lisa Marie	PO Box 2626	Seward	AK	99664	907-224-5158
16	William E. Jacobson	Nordic Viking	PO Box 69	Kodiak	AK	99615	907-486-0881
17	Byron L. Pierce	Nuka Island	PO Box 2486	Kodiak	AK	99615	907-486-5533
18	Jeff Steele	Obsesson	PO Box 1732	Kodiak	AK	99615	907-487-2248
19	Jeff Steele	Pacific Mist	PO Box 1732	Kodiak	AK	99615	907-487-2248
20	Paul J. Duffy	Pro Surveyor	PO Box 2795	Kodiak	AK	99615	907-486-6161
21	Richard Newby	Red Baron	2510 Aspen Dr.	Anchorage	AK	99517	907-248-4639
22	William E. Jacobson	Ruff & Reddy	PO Box 69	Kodiak	AK	99615	907-486-0881
23	David Wilson	Silent Lady	Box 273	Sand Point	AK	99661	907-383-3755
24	Evening Star Inc.	Storm Petrel	PO Box 1147	Petersburg	AK	99833	907-772-4294
25	Jimmy A. Weaver	Susitna	PO Box 664	Homer	AK	99603	907-235-6270
26	Icicle Seafoods, Inc.	Viking Queen	PO Box 1147	Petersburg	AK	99833	907-772-4294
27	Dennis Deaver	Beauty Bay	1223 Parkway Drive	Richmond	CA	94803	510-223-7825
28	Dennis Deaver	Pacific Sun	1223 Parkway Drive	Richmond	CA	94803	510-223-7825
29	Walt Raber	Airedale	PO Box 190	Woolwich	ME	4579	207-784-4529
30	Walt Raber	Ocean Spray	PO Box 190	Woolwich	ME	4579	207-784-4529
31	Walt Raber	Providian	PO Box 190	Woolwich	ME	4579	207-784-4529
32	Harlan Dean Jr.	Westling	PO Box 61	Stryker	MT	59933	406-881-2208
33	Ted Painter	Alaska Trojan	3859 Yaquina Bay Road	Newport	OR	97365	541-265-5422
34	Michael A. (Spike) Jones	Guardian	1917 N Beaver Creek Rd.	Seal Rock	OR	97365	541-563-4321
35	Fairweather Fisheries, Inc.	Jeanoah	2225 NW Oceanview Dr.	Newport	OR	97365	514-265-7535

Owners who have signed petition. *Bold Type Indicates Aleutian Islands Brown Crab LLP Qualified

36	Ted Painter	Kiska Sea	3859 Yaquina Bay Road	Newport	OR	97365	541-265-5422
37	Gary Painter	New Venture	PO Box 1027	Newport	OR	97365	541-574-0256
38	Fairweather Fisheries, Inc.	Pacific Venture	2225 NW Oceanview Dr.	Newport	OR	97365	514-265-7535
39	Heuker Bros., Inc.	Sandra Five	62975 NE Tumalt Rd	Cascade Locks	OR	97014	541-374-8255
40	Ted Painter	Siberian Sea	3859 Yaquina Bay Road	Newport	OR	97365	541-265-5422
41	Michael A. (Spike) Jones	Silver Spray	1917 N Beaver Creek Rd.	Seal Rock	OR	97365	541-563-4321
42	**Stephen Hall**	**Spirit of the North**	**355 NE Golf Course Dr.**	**Newport**	**OR**	**97365**	**541-265-7209**
43	Gary Painter	Trailblazer	PO Box 1027	Newport	OR	97365	541-574-0256
44	Heuker Bros., Inc.	Zone Five	62975 NE Tumalt Rd	Cascade Locks	OR	97014	541-374-8255
45	AJ Fisheries, LLC	AJ	1120 N.W. 51st	Seattle	WA	98107	206-781-0470
46	**Asbjorn O. Nordheim**	**Alaska Sea**	**18509 - 8th Avenue N.W.**	**Seattle**	**WA**	**98177**	**206-546-6637**
47	Daniel T. Gunn	Aleutian Beauty	3600 15th Ave. W. #202	Seattle	WA	98119	206-281-7145
48	Rick Shelford	Aleutian Lady	PO Box 12946	Mill Creek	WA	98082	425-787-2576
49	Kaldestad & Gordon Kristjanson	Aleutian Mariner	20301 - 191st Avenue NE	Woodinville	WA	98072	206-992-5367
50	**Ron Peterson**	**Aleutian No. 1**	**3901 Leary Avenue N.W. #9**	**Seattle**	**WA**	**98117**	**206-547-5639**
51	Hjelle Ent.	Aleutian Rover	18029 - 13th NW	Shoreline	WA	98177	206-542-8215
52	**Kristopher Knutsen**	**Aleutian Spray**	**101 Nickerson St. Suite 340**	**Seattle**	**WA**	**98019**	**206-790-4520**
53	Daniel T. Gunn	Amatuli	3600 15th Ave. W. #202	Seattle	WA	98119	206-281-7145
54	Joseph Wabey	American Eagle	1600 NW 198th	Shoreline	WA		206-679-8722
55	Roger Overa	American Star	16 Columbia Way	Bellevue	WA	98006	425-747-1356
56	Gary Buholm	American Viking	101 Nickerson St. Suite 340	Seattle	WA	98019	206-948-5234
57	**Morris Hansen**	**Andronica**	**3048 NW Market Street**	**Seattle**	**WA**	**98107**	**206-781-8777**
58	Joseph Wabey	Arctic Eagle	1600 NW 198th	Shoreline	WA		206-679-8722
59	Kaldestad & Walter Christensen	Arctic Mariner	101 Nickerson; Suite 340	Seattle	WA	98109	206-819-7390
60	Kris Poulsen	Arctic Sea	1143 NW 45th Street	Seattle	WA	98107	206-783-6708
61	Gudjon Gudjonsson	Autumn Dawn	3600 15 Ave. W.; Suite 202	Seattle	WA	98119	206-281-7145
62	**Ballyhoo & Owners**	**Ballyhoo**	**4025 - 21st Avenue W**	**Seattle**	**WA**	**98199**	**206-283-0224**
63	Ronald M. Sherin	Barbara J	1020 Haddon Rd.	Anacortes	WA	98221	360-293-6768
64	**Bella-K of Seattle LLC**	**Bella-K**	**1120 N.W. 51st**	**Seattle**	**WA**	**98107**	**206-781-0470**
65	Arctic Ventures	Bering Empire	7643 112th St.	Kirkland	WA	98034	206-650-3783
66	Kris Poulsen	Bering Sea	1143 NW 45th Street	Seattle	WA	98107	206-783-6708
67	**Harold Rice & D. Hostetler III**	**Bering Star**	**606 N 178th Street**	**Shoreline**	**WA**	**98133**	**206-546-1735**
68	Blue Aleutian, LLC.	Blue Aleutian	4502 14th Avenue N.W.	Seattle	WA		206-782-3609
69	**Blue Dutch, LLC.**	**Blue Dutch**	**4502 14th Avenue N.W.**	**Seattle**	**WA**		**206-782-3609**
70	Olaf Vedoy	Blue Fin	19829 - 168th Street SE	Monroe	WA	98272	360-805-8708
71	Kevin Kaldestad	Bristol Mariner	5470 Shilshole Ave. NW #4b	Seattle	WA	98107	206-783-3018

Owners who have signed petition. *Bold Type Indicates Aleutian Islands Brown Crab LLP Qualified

72	Kris Fanning	Caprice	164 Pelican Way	Friday Harbor	WA	98250	360-378-2821
73	Ronald Brill	Cascade	16625 Redmond Way; Suite M19	Redmond	WA	98052	206-910-5225
74	Jaromir Mach	Centaurus	PO Box 17701	Seattle	WA	98107	206-362-3977
75	B. Haerling & J. Kristiansen	Confidence	5015 140th NW	Stanwood	WA	98292	425-745-1598
76	Jaromir Mach	Constellation	PO Box 17701	Seattle	WA	98107	206-362-3977
77	Brad L. Warren	Debra D	16559 Kamb R.	Mt. Vernon	WA	98273	360-708-2656
78	Deception Fisheries	Deception	266th Ave. SE	Issaquah	WA	98027	425-391-5008
79	Kris Fanning	Denali	164 Pelican Way	Friday Harbor	WA	98250	360-378-2821
80	James R. Ostrom	Diligence	16324 38th Ave NW	Stanwood	WA	98292	360-652-5191
81	Dr. K of Seattle LLC	Dr. K	1120 N.W. 51st	Seattle	WA	98107	206-781-0470
82	Kris Fanning	Entrance Point	164 Pelican Way	Friday Harbor	WA	98250	360-378-2821
83	Asbjorn O. Nordheim	Erla N	18509 - 8th Avenue N.W.	Seattle	WA	98177	206-546-6637
84	Neptune LLC & Mauritzen	Fierce Contender	2615 4th Avenue; Suite 700	Seattle	WA	98121	206-770-9010
85	Jose R. Cestille	Guiding Star	4241 21st Ave. West #100	Seattle	WA	98199	206-282-5883
86	Ildhuso Fisheries (G. Ildhuso)	Gun-Mar	101 Nickerson #340	Seattle	WA	98109	206-715-5988
87	Spencer Bronson	Husky	18202 Bellflower Road	Bothell	WA	98012	425-776-2552
88	Icy Bay, Inc.	Icy Bay	7643 112th St.	Kirkland	WA	98034	206-650-3783
89	Alf Forde	Kari Marie	9784 Marine View Drive	Mukilteo	WA	98275	425-315-0600
90	Lance Farr	Kevleen K	8941 - 179th Pl SW	Edmonds	WA	98026	425-672-9345
91	Alf Forde	Kirsten Marie	9784 Marine View Drive	Mukilteo	WA	98275	425-315-0600
92	Bruce Joyce	Kristen Gail	11115 SW Waverly Pl.	Port Orchard	WA		206-390-0466
93	David Thompson	Labrador	Box C-5030	Seattle	WA	98105	206-547-2100
94	Mar-Gun Fisheries (G. Ildhuso)	Mar-Gun	101 Nickerson #340	Seattle	WA	98109	206-715-5988
95	Kris Fanning	McKinley	164 Pelican Way	Friday Harbor	WA	98250	360-378-2821
96	Arctic Ventures	Mystery Bay	7643 112th St.	Kirkland	WA	98034	206-650-3783
97	Kevin Kaldestad	Nordic Mariner	5470 Shilshole Ave. NW #4b	Seattle	WA	98107	206-783-3018
98	**Gene E. Watson**	**Norseman**	**949 Wildwood Road**	**Curtis**	WA	**98538**	**360-245-3400**
99	Per Fjortoft	Norseman II	20414 92nd Ave. W.	Edmonds	WA	98020	425-776-4060
100	**Soren Sorensen**	**North Command**	**1805 Village Green Drive #1**	**Mill Creek**	WA	**98012**	**425-357-6909**
101	Kris Poulsen	North Sea	1143 NW 45th Street	Seattle	WA	98107	206-783-6708
102	Kevin Kaldestad	Northern Mariner	5470 Shilshole Ave. NW #4b	Seattle	WA	98107	206-783-3018
103	Sig Hansen	Northwestern	18361 - 8th Avenue N.W.	Seattle	WA	98177	206-546-4397
104	Gretr Gudmonsson	Notorious	3600 15 Ave. W.; Suite 202	Seattle	WA	98119	206-281-7145
105	Nowitna Fish. LLC	Nowitna	7643 112th St.	Kirkland	WA	98034	206-650-3783
106	Kevin Kaldestad	Pacific Mariner	5470 Shilshole Ave. NW #4b	Seattle	WA	98107	206-783-3018
107	Hjelle Ent.	Pacific Star	18029 - 13th NW	Shoreline	WA	98177	206-542-8215

Owners who have signed petition. *Bold Type Indicates Aleutian Islands Brown Crab LLP Qualified

108	Pavlof, Inc.	Pavlof	4025 - 21st Avenue W	Seattle	WA	98199	206-283-0224
109	F/V Pinnacle Inc.	Pinnacle	19618 - 61st Avenue SE	Snohomish	WA	98296	360-668-3580
110	Mason Williams	Polar Lady	PO Box 17701	Seattle	WA	98107	206-784-0171
111	Sig Ingebretsen	Polar Sea	17010 12th Ave NW	Shoreline	WA	98177	206-542-6984
112	Svino Ent./Nyhammer Ent.	Rollo	16905 13th Ave. N.W.	Shoreline	WA	98177	206-542-5573
113	Alf Forde	Royal Pacific	9784 Marine View Drive	Mukilteo	WA	98275	425-315-0600
114	Tomie Marsh	Savage	101 Nickerson St. Suite 340	Seattle	WA	98019	206-972-8217
115	Leif Nordbo	Scandies Rose	3027 NW 94th Street	Seattle	WA	98117	206-890-4900
116	Sea Fisher LLC	Sea Fisher	1120 N.W. 51st	Seattle	WA	98107	206-781-0470
117	Larry Hendricks	Sea Star	19293 Stone Ave. North	Shoreline	WA	98133	206-546-3140
118	**Douglas Williscroft & D. Gunn**	**Sea Venture**	**18236 40 Ave NE**	**Seattle**	**WA**	**98155**	**206-363-4042**
119	Susan Kidder Goad	Sea Warrior	1212 - 31st Street	Anacortes	WA	98221	360-293-3005
120	Secret Island LLC	Secret Island	7643 112th St.	Kirkland	WA	98034	206-650-3783
121	Dan Mattsen	Shaman	Box 2686	Poulsbo	WA	98370	360-697-2666
122	**Shishaldin Boat Co. LLC**	**Shishaldin**	**4025 - 21st Avenue W**	**Seattle**	**WA**	**98199**	**206-283-0224**
123	Timothy Vincent	Stormy Sea	16404 38th Ave. NW	Stanwood	WA	98292	360-652-0254
124	Sultan Fisheries	Sultan	4502 14th Avenue N.W.	Seattle	WA		206-782-3609
125	Tempest Fisheries, Inc.	Tempest	4502 14th Avenue N.W.	Seattle	WA		206-782-3609
126	**Asbjorn O. Nordheim**	**Tiffany**	**18509 - 8th Avenue N.W.**	**Seattle**	**WA**	**98177**	**206-546-6637**
127	Jay Bowlden	Valiant	12616 - 25th Avenue SE	Everett	WA	98208	425-742-5976
128	**Gordon D. Rush**	**Western Viking**	**5715 Wollochet Dr.**	**Gig Harbor**	**WA**		**253-853-7030**
129	Al Chaffee	Westward Wind	3600 15th W. #300	Seattle	WA		206-216-0220
130	Windy Bay, Inc.	Windy Bay	7643 112th St.	Kirkland	WA	98034	206-650-3783
131	John G. Jorgensen	Wizard	2442 NW Market Street #438	Seattle	WA	98107	206-250-7142

FINAL

Crab Advisory Committee
As of October 2, 2007
Report to the Council

The committee would like to recognize the contributions of Chris Heuker who is recently deceased. Chris was a giant of a man whose leadership as the manager of the Bering Sea Crab Cooperative and as a Director of the Bering Sea Arbitration Organization are greatly missed.

Regulatory Recommendations

Market reports and non-binding formulas for fisheries unlikely to open

Under the current regulations, market reports and non-binding formulas are required to be generated annually for each fishery regardless of whether the fishery opens. In the first two years of the program, the St. Matthew Island and Pribilof fisheries have not opened. During this period, the arbitration organizations did not contract for the production of market reports or non-binding formulas for these fisheries. A modification of the regulations could be developed to remove the requirement for producing a market report for fisheries unlikely to open.

The committee reached a consensus that the arbitration organizations could adequately address this issue by agreement. Industry and the organizations have adequate information to assess the potential for fisheries to be closed prior to the season. A modification of the current regulation could be considered to exempt any fishery from the market report and non-binding formula requirements provided the arbitration organizations agree that the fishery is unlikely to open. In the event that ADF&G later announced that the fishery would be opened, the arbitration organizations would be required to obtain the report and formula. The amendment could also require that the arbitration organizations' agreement include a contingency plan for obtaining the report and formula, in the event that a fishery opening was announced.

Possible amendment (alternative to the status quo)

In the event that the arbitration organizations representing at least 50 percent of the PQS holders and at least 50 percent of the unaffiliated QS holders agree that a fishery is unlikely to open, neither a market report nor non-binding formula will be required for the fishery. Any such agreement will include provision for the production of the market report and non-binding formula, in the event that an opening is later announced for a fishery, specifying a timeline for the production of those reports.

Draft purpose and need statement

Under the current regulations, market reports and non-binding formulas are required to be generated annually for each fishery regardless of whether the fishery is likely to or does open. This requirement adds to the cost of arbitration by needlessly requiring participants to contract for the production of these documents. An amendment that allows participants to avoid this requirement when a fishery is unlikely to open could save on costs of the arbitration system. The amendment should include provision for the preparation of the market report, in the event the fishery should open.

Timeline for the golden king crab market report and formula does not allow for data from most recent fishery to be used

Under the current regulation, data from the most recent season are not available for use in developing the market report and non-binding formula because those reports are required to be completed 50 days prior to the August 15th fishery opening. Allowing an additional 20 days for the completion of the report and formula would allow the use of data from the most recent fisheries. The committee reached a consensus that the current rule be modified to require the reports 30 days prior to the fishery opening.

Possible amendment (alternative to the status quo)
The market report and non-binding price formula for the golden king crab fisheries will be required to be completed at least 30 days prior to the opening of those fisheries.

Draft purpose and need statement
Under the current regulation, the market report and non-binding formula for the Aleutian Islands golden king crab fisheries are required to be completed 50 days prior to the August 15th fishery opening. Under this timeline, data from the most recent season are not available for use in development of those reports. The inability to use data from the most recent season could diminish the accuracy and quality of these reports. Postponing the due date of these reports to a later time in the preseason could allow for more complete and accurate reports that provide timely information to market participants.

Staleness of the market reports
The current requirement that market reports be complete at least 50 days prior to the season prevents the inclusion of the most current and relevant pricing information in the report. In addition, the prohibition on supplements to the report prevents modification of the requirement to provide useful market information in season or after completion of the initial report. The committee discussed the antitrust concerns that contributed to the scheduling defined by the existing rule. Committee members agreed that the reports could rely exclusively on publicly available information, which would allay antitrust concerns related to report timing.

Possible amendment (alternative to the status quo)
The regulatory amendment could generally provide that at least 50 days prior to a season opening, the arbitration organizations representing at least 50 percent of the PQS holders and at least 50 percent of the unaffiliated QS holders are required to reach an agreement for the provision of a market report (which may include supplements at any time prior to the end of the season). The market report will utilize only publicly available information. Such an amendment would provide the arbitration organizations with the most latitude to define a market report that will best serve participants in a fishery.

Draft purpose and need statement
The current requirement that market reports be complete at least 50 days prior to the season prevents the inclusion of the most current and relevant pricing information in the report. In addition, the prohibition on supplements to the report prevents modification of the requirement to provide useful market information in season or after completion of the initial report. More timely and relevant market information to be used for price negotiations might be provided to participants in the fisheries, if those participants are permitted to negotiate agreeable terms (including due dates) for the provision of a market report and supplements to suit their needs.

Compressed time for share matching and initiation of arbitration
Under the current regulations and TAC announcement schedule, the share matching and arbitration initiation time periods for most fisheries are compressed into a very tight time period. All pre-arbitration share matching and initiation of arbitration proceedings for the Bristol Bay red king crab, the Bering Sea *C. opilio*, the Bering Sea *C. bairdi*, the Pribilof red and blue king crab, and the St. Matthew Island blue king crab fisheries takes place during a single 15 day period. Possible solutions could be to extent the length of these periods or to alter season openings for some fisheries to stagger these periods for the different fisheries.

At the last meeting, the committee reached a consensus that simply stating these periods as "business day" periods, rather than "calendar day" periods would relieve some of the time pressure. The committee

was concerned that changes in season openings because those changes could limit changes in fishing practices that could be desirable in the future. The committee also elected to avoid substantial changes in the timing of these periods, which could affect the balance of interests under the current system. Some committee members expressed an interest in reconsidering this issue during the discussion of the minutes from the last meeting. These members believed that the further encroachment of negotiations on the season by extending share matching and arbitration could be problematic, particularly in the Bristol Bay red king crab fishery. Given the concern for extending share matching into the season, the committee agreed that no amendment is needed.

The committee discussed incorporation of additional checks in sharematch.com that provide more complete and timely notice of offers and commitments to persons involved in share matching. The committee also discussed the need for members of both sectors to track share matching closely during the share matching period.

Possible amendment
No amendment is suggested.

Delivery of 'highest arbitrated outcome' to the formula arbitrator
Under the current regulation, the formula arbitrator is required to consider the 'highest arbitrated outcome' for the proceeding season when developing the non-binding formula. The regulation does not provide an explicit mechanism for delivery of the 'highest arbitrated outcome' to the arbitrator. NMFS currently provides the formula arbitrator with the arbitrator's finding and the last best offer submissions (including supporting materials) of all parties to the arbitration for this purpose. NMFS has suggested that the arbitration organizations deliver these materials to the formula arbitrator to streamline that process. Committee members generally agreed that the current practice is appropriate and should be continued.

Possible amendment
No amendment is suggested.

Immunity for arbitration organizations, arbitrators, market analysts, and the third party data provider
Staff reported that the Council has requested NOAA GC examine the potential development of provision of immunity for arbitration organizations, arbitrators, market analysts, and the third party data provider. Any such immunity would not apply to breaches of contract, acts of malfeasance, or similar intentional misdeeds. The committee generally expressed its support of this grant of immunity.

Possible amendment (alternative to status quo)
Arbitration organizations, arbitrators, market analysts, and the third party data provider should be granted immunity from lawsuits related to their acts in their respective capacities as arbitration organizations, arbitrators, market analysts, and the third party data provider. Any such immunity would not apply to breaches of contract, acts of malfeasance, or similar intentional misdeeds.

Draft purpose and need statement
To enable arbitration organizations, arbitrators, market analysts, and the third party data provider to provide their services with independence and free from bias could require that those parties be free from the threat of potential claims related to their performance of those services. A grant of immunity for acts taken in performance of their duties may provide this degree of protection.

Timeline for initiation and completion of arbitration using the lengthy season approach
The committee revisited the discussion concerning the ambiguity in the current regulations concerning time limits on arbitrations conducted under the lengthy season approach. The committee confirmed that

for fisheries, other than the brown king crab fisheries, initiation of arbitration prior to the end of the crab fishing year on June 30th would be timely, provided the proceeding is finalized by July 31st. this timeline would allow the outcome to be provided to the formula arbitrator for consideration in developing the following year's non-binding price formula. In the brown king crab fishery (which opens August 15th) the committee agreed that proceedings should be initiated by May 31st and completed by June 30th, to ensure that the outcome would be available to the formula arbitrator for the following season.

Possible amendment
No amendment is suggested. The suggested timelines can be implemented by the arbitration organizations and arbitrators.

Additional Discussions

The committee discussed several issues related to the program beyond the regulatory issues addressed above. This section of the report summarizes those discussions.

Share transfers
Several committee members expressed concerns over the processing time for transfers. The committee also recognizes that part of their frustration with transfers could arise from a failure to adequately communicate to RAM their concerns and interests. To address this shortcoming, the committee developed a list of issues and interests that it shared and discussed with RAM representatives, who attended a meeting. A summary of the issues and RAM responses is attached to this report.

The committee expresses its gratitude to the staff of RAM for working to develop an expedited process for transfer applications. The committee believes that real time transfer processing is important to addressing logistical issues that contribute to unintended uses of B shares and that RAMs efforts to expedite share processing will make important contributions to addressing those issues.

Accessing first wholesale information during arbitration
The committee discussed harvesters' need for first wholesale price information from processors to allow for effective participation in the arbitration system and implementation of the arbitration standard. The committee generally agreed that the issue might be best addressed either through the arbitration organizations or through informal arrangements by industry, rather than through the Council process. If industry and the arbitration organizations are unsuccessful in reaching a resolution of this issue, the public and committee could develop proposals for minimum data requirements for committee consideration. The committee agreed that it should allow time for industry and arbitration organization discussion of this issue prior to including it on its agenda. If industry is not capable of addressing the issue, it could be revisited by the committee at a future meeting.

The potential replacement of COAR data in arbitration
The committee also discussed the potential for improving data for defining the historic division of revenues in the arbitration system. Currently, COAR provide the best data and have been used by the formula arbitrator to develop the price formula in the preseason. State representatives at the meeting briefly reviewed the process for submission of COAR data and some issues with reliability, including the inability to isolate data from a single fishery or region. Committee members expressed a general belief that historic ex vessel prices could be reliably determined using data available to both sectors, which could be compared with public sources. In some instances, bonuses and post-season adjustments might be missing from some sources, but reliable estimates of historic ex vessel prices could be generated. Development of a time series of historic first wholesale prices would be more complicated. Any data would need to undergo some audit process and would need to be collected on an individual basis from processors. These data would need to be aggregated for release. Committee members also expressed some

concern that the variety of product forms and recovery rates could complicate generation of historic first wholesale prices. In concluding these discussions, the committee agreed that the selection of data for use in arbitration is beyond its current purpose.

Use of B shares

The committee spent substantial time discussing the current uses of B shares and the extent to which B shares are being used for the purposes intended by the Council. The starting point for these discussions was the three possible uses of B shares that may have been intended by the Council: providing competitive negotiated deliveries, serving unserved or underserved markets, and to facilitating processor entry.

The committee discussed several possible purposes for B share use and methods for minimizing uses for unintended purposes. Committee members generally agreed that B shares are not excessively used to cover deadloss and that deadloss is not preventing B shares from being used for their intended purpose.

Much of the committee discussion centered around the use of B shares to address logistical contingencies that arise because of the IPQ and regional landing requirements applicable to A shares. Several committee members cited the fire that temporarily disabled the Steller Sea and ice conditions in the North region as examples of such contingencies. Some committee members believe that unpredictable logistical complexities such as these require them to reserve B shares against contingencies, preventing their use for their intended purposes. Other committee members suggested that the flexibility of being able to fish shares at any time and move shares among cooperative vessels has allowed cooperatives to address most of these logistical challenges internally. Harvesters also asserted that coordination of landings is difficult with preseason A share commitments to IPQ holders. Changes in commitments have efficiency costs as vessels must change delivery locations. It was generally agreed that effectively addressing coordination problems would require contributions of both IFQ and IPQ holders.

The committee also discussed the need for a more streamline system of transfers and a system of post-delivery transfers to alleviate logistical pressures that consume B shares. The committee discussed the potential for an inter-cooperative to address logistical complications. Several committee members expressed concern that use of an inter-cooperative could be complicated, since the current system does not accommodate the inclusion of affiliated harvesters in a cooperative that includes unaffiliated harvesters. The committee also raised the issue of whether an inter-cooperative developed through new regulations would differ under an inter-cooperative under the existing regulations.

The committee also discussed the potential for trading of processor shares to address logistical complications. Many committee members acknowledged that these trades could be limited by antitrust concerns. In addition, one committee member suggested that the benefits of these transactions could be limited, if they result in a processor having products packaged in another processors packaging and produced to that other processor's specifications.

One committee member suggested that relief from regionalization could limit the extent that B shares are needed to address logistical complications. Another committee member suggested that any 'emergency' relief from regional landing requirements would need to have clear, easily administrable criteria to allow for implementation and enforcement. Another committee member suggested that community consent should be necessary for any emergency waiver of a regional landing requirement to ensure that communities do not bear the costs of the emergency. The committee agreed that this discussion is beyond the scope of the committee's current direction from the Council. The committee suggested that members of communities should be included in any further discussion of this issue. The committee agreed that

discussions of potential relief from regional delivery requirements be delayed until after the October Council meeting and further direction from the Council.

One committee member also suggested that some B shares are used to increase operational efficiency. For example, B shares may be used to enable a vessel to make a full trip (rather than catch only a portion of a boat's capacity). Some committee members suggested that these decisions could prevent B shares from serving their intended purposes, but observed that the decision was in the control of the harvester and that the efficiency benefits accrue to the harvester. The committee disputed whether decisions to use B shares to achieve efficiency in harvest operations is an intended use of B shares under the program. Processors assert that this use works to harvesters advantage. Harvesters asserted that these decisions are compelled by the restrictive delivery restrictions in the program (i.e., regional and IPQ delivery requirements). Harvesters also suggested that B shares are currently used to cover overages on A share deliveries. These members suggested that the benefit from covering an A share overage with B shares exceeds the potential benefit of underharvesting (and underdelivering) an A share commitment to an IPQ holder. Some harvesters suggested that the current small quotas prevent use of B shares for anything but topping off loads of A share deliveries.

Some harvesters expressed concern that small niche markets and smaller processors may be difficult to serve under any system because efficiency benefits of delivering a full load are too great to overlook. Delivering to multiple processors increases deadloss and reduces quality for the processor taking the second delivery from the bottom of the tank. Processors identified cases of split deliveries (offloading A shares with one processor and B shares with another) as evidence that B shares can be used to stimulate competition, despite harvesters need to achieve harvest efficiencies.

Some committee members pointed out that, to some degree, B shares have served all of the intended purposes. Some harvesters have had the opportunity to market B shares based strictly on price. Committee members also described the entry of a few small processors to the fishery, who have taken deliveries of B shares. Some of these deliveries were made by cooperatives that pooled B shares to make deliveries to these smaller markets. Some of these deliveries were made to Kodiak in both the Bristol Bay red king crab and *C. opilio* fisheries. One committee member also mentioned the production and sale of a small amount of live Bristol Bay red king crab from B share landings as evidence of a new product form. These all demonstrate that at least a portion of the B share pool has served its intended purpose.

Some committee members suggested that some of the difficulty in addressing the B share issue is caused by the relative lack of experience under the program (2 years). Year-to-year changes in the fisheries contributed to a variety of factors that influence harvesters' ability to use B shares to pursue the best markets. These committee members suggested that participants will learn more with each year and that continued discussion of B share issues could be fruitful in resolving issues as they are identified.

Future action of the committee

Committee members generally agree that the advisory committee is an effective means of addressing technical issues that have arisen under the crab program. The committee has generally believes that it should continue to meet to address existing and new problems under the program. Specifically, the committee believes that a better understanding of the issues surrounding the use of B shares can be attained by further committee discussion. To aid with these discussions, the committee would like to request additional information from staff, including some data analysis concerning the spatial and temporal distribution of B share landings, as well as the relationship of those landings to A share landings.

Several committee members also expressed an interest in continuing the discussion of the potential need for relief from regionalization to address contingencies (such as icing), but acknowledged that community representation is important for the discussion of this issue. Community representation on the committee could also (more broadly) contribute to discussion of the use of B shares to address inseason contingencies and the effects of the program's regionalization component on the use of B shares. The committee acknowledged that all communities with active industry members could have an interest in these issues. Some members suggested that non-IPQ holding processors might have useful inputs into the discussion. While representation of additional constituencies could be beneficial to the committee, the committee recommends that care be taken to maintain a small enough size to ensure that the committee can operate effectively. In addition, some committee members suggested that the committee could remain effective, if members representing new constituencies limited their participation to aspects of the program that affect their constituencies. For example, price formation and the program's arbitration component should not be of concern to communities, so community involvement in the discussion of those issues might not be necessary. To date, the committee put no limit on public participation in its meetings. Members of the public are permitted on request. The committee would like to maintain a size and composition that allows it to continue this practice.

Transfer issues for discussion with RAM
Crab advisory committee
July 2007

Consolidation of transfer authority in an agent
Use a third party agent to administer all transfers to reduce the number of documents and individuals that RAM must deal with. This might be similar to what Rickey and Associates have been doing for thirty years.

RAM response – this is currently permitted by authorizing third parties to engage in transfers.

Electronic transfer capability
Use a signed, notarized document on file with RAM authorizing a person to use a RAM issued PIN to engage in transactions. The use of the PIN would insulate RAM from liability for mistakes.

RAM response – this is currently being developed, but will require regulatory amendment.

IFQ and IPQ transfers – For pre-issuance transfers, include a system for the automatic transfer of IFQ/IPQ on issuance of annual IFQ/IPQ. Administering these changes prior to IFQ/IPQ issuance is critical to the share matching and arbitration process. Administering these transfers after issuance leads to confusion in both sectors and contributes to disputes by involving multiple participants from a sector in a transaction that should only involve the recipient of the transferred shares.

RAM response – the agency will need to consider whether pre-issuance transfers are permissible – the issue will need to be developed with input from NOAA GC. Relaxing the share matching and arbitration deadlines may relieve some of the time pressures arising from pre-issuance transfers. Electronic transfer systems may alleviate any burden that pre-issuance transfers are intended to address.

Real time transfers
All transfers should be real time. A system of electronic transfers would allow transfers 24/7.

RAM response – this is currently being developed, but will require regulatory amendment.

Fax transfer applications
Allow any paperwork to be submitted by fax

RAM response – currently permitted for inter-cooperative transfers, provided document is fully legible (including notary stamps); for long term change regulatory change will be required

A share landing requirement exemption
In circumstances beyond the harvester's control (processor break down, ice, extended delivery dates), exempt A shares from delivery requirements allowing the delivery of catch under B share terms. Applies only to product already onboard.

RAM response – this is inconsistent with the rationalization program and would require Council action.

Update on RAM position on post-delivery transfers
Post delivery transfers of overages or underages.

RAM response – the Council is currently addressing this issue.

Industry panel for agency interaction when developing new transfer processes
Use an industry panel made up of persons that frequently process transfers during the design phase as a sounding board for practical application of the tools.

RAM response – RAM intends to solicit input and coordinate with industry in the development of new transfer processes

Industry test group
A test group comprised of specifically selected industry members that frequently process transfers to provide an in tandem procedure for de-bugging the program could ensure that the system is fully functional when implemented.

RAM response – RAM intends to solicit input and test systems with industry assistance.

Fully monitored transfer station
The transfer station at RAM should be monitored at all times to avoid delays in transfers. Currently, messages may not be returned for one or two days. At a minimum, one person should be available to handle requests and calls. A system of 'out of office' emails and voice mail messages could be used to notify persons of on duty persons for handling transfer requests.

RAM response – the RAM 800 number currently monitored at all times during normal business hours. Some delay may arise from callers asking for a specific person, rather than submitting their questions to persons answering the line.

Single person signoff on transfers
Can a system in which one expert signs off on transfers, rather than two. A random audit process could be used to test the work.

RAM response – the current two person review is required for verification purposes. Electronic transfers may alleviate some of the time burden arising from this review process.

Revisions to the transfer form
Revisions to the transfer form could simplify the form.

RAM response – specific suggested changes in the forms are welcome and will be considered.

C-3(b)

United Crab Harvesters
Pursuing Solutions

United Crab Harvesters
101 Nickerson St. #340
Seattle, WA. 98109

United Crab Harvesters (UCH) is a trade association composed of unaffiliated Bering Sea Aleutian Island Crab Harvesting Cooperatives who's members meet the requirements of the Fishermen's Collective Marketing Act (FCMA, 15 USC § 521 et seq.).

The organizations purpose is to promote and further the common interests of independently owned catcher vessels that harvest fish and crab in the Being Sea, Aleutian Islands and/or the Gulf of Alaska.

UCH's representation of independent crab harvesters in the active BSAI crab fisheries is identified below. Information is based on the **2006. 2007 IFQ fishery** information per the NMFS Website on October 06, 2006 as provided for your reference.

	BBR	BSS	EBT	WBT	EAG	WAG	TOTAL
Unaffiliated IFQ	10,475,365	24,464,849	1,195,583	697,590	2,482,144	1,275,504	40,591,035
UCH Members	7,383,848	16,567,883	842,824	491,765	278,129	682,815	26,247,264
UCH % Of unaffiliated	**.7049**	**.6772**	**.7049**	**.7049**	**.1121**	**.5353**	**.6466**

2007. 2008 IFQ fishery information per the NMFS Website on October 05, 2007.

Unaffiliated	13,451,335	40,873,932	2,200,052	1,389,647	2,096,758	1,210,564	61,222,284
UCH Members	9,883,484	28,932,619	1,603,376	1,012,761	966,106	900,576	43,298,922
UCH % Of unaffiliated	**.7347**	**.7078**	**.7287**	**.7287**	**.4607**	**.7439**	**.7072**

NICKERSON & ASSOCIATES
Economic Analysis • Statistics • Public Policy

September 30, 2007

Ms. Lynn Langford Walton
United Crab Harvesters

RE: BSAI A/B Share and Arbitration Report

Dear Ms. Walton,

Attached to this letter is a description of our observations and analysis regarding the A/B share issue and the arbitration system used in the Bering Sea Aleutian Island Crab fishery rationalization program. It is obviously brief and does not include an exhaustive list of references. As requested, we have tried to keep it succinct and too the point on both issues.

I have included resumes of the people in our office who have worked on the analysis and a three page summary of our findings and recommendations.

Please get in touch with me if you need anything with regards to this.

Respectfully,

Peter H. Nickerson, Ph.D
Principal, Nickerson & Associates

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Peter Nickerson
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Nickerson & Associates
Seattle, Washington
September 28, 2007

Discussion Paper on BSAI 90-10 and Arbitration

In October 2006 Nickerson & Associates was asked by United Crab Harvesters to conduct an analysis of the effects of BSAI Crab Rationalization on the industry. We have studied and analyzed, given the constraints of data availability, numerous aspects of the fishery and the effects Rationalization has had on them. For this paper we have been specifically asked to focus on our observations regarding the 90/10, A/B share provisions of Rationalization and the arbitration system that was created to solve price disputes between harvesters and processors. As with all of our endeavors related to the study of BSAI Crab Rationalization, our observations are limited by our lack of access to micro-data in the fishery and the confidentiality constraints attached to a significant portion of the data to which we did gain access. In what follows we refer to and use publicly reported data. We believe our observations and recommendations are supportable with those data. Access to micro-data, housed with NMFS and ADF&G, would likely allow more expansive analysis and, we think, support our conclusions and our recommendations.

In this report, for clarity and focus, we have dispensed with detailed descriptions of how the Crab Rationalization program was designed and why numerous components of the system were included. We assume the reader has familiarity with the system and understands the basic framework of the A/B share and arbitration provisions of the system.

Introduction

The creation of an A/B quota share distinction in the BSAI Crab Rationalization program was designed in order to lessen the monopsonistic purchasing power that potentially was acquired by processors with the creation of individual processor quotas (IPQ's). The argument was that if all harvester quota must to be delivered to a particular set of processors, harvesters would be at a distinct disadvantage when negotiating prices and processors would have less incentive to compete. The existence of some amount of B shares that could be delivered and sold to any processor would provide harvesters an independent price determination mechanism, provide some flexibility for harvesters, assure price competition among processors and possibly attract independent processors and processing and market innovation to the marketplace.

Similarly, the arbitration system in the rationalized fishery was created and designed to provide harvesters some relief from the potential market power handed to processors with the creation of the processor quota. It is specifically designed to be used by harvesters when they feel price negotiations have reached an impasse.

It is our observation that while the arbitration system is complicated and somewhat costly, it serves its purpose effectively. In two years there have been surprisingly few arbitrations and the outcomes seem to have favored the harvesters. The cost to invoke it and the risks associated with the last-best-offer format seem to force participants to come to terms before jumping into arbitration. Though it is certainly possible to create numerous other arbitration systems or add or subtract rules of conduct in the present one, we see no reason for doing so.

The system is designed to force the parties to a quick agreement on prices, scheduling and performance terms of delivery and is supposed to protect harvesters. We agree with John Sackton in his observation that the basic framework of arbitration seems to work as intended. Unless the Council decides to amend the original goals it put forth when it created the arbitration system, we see nothing to be gained by introducing changes in it.

The A/B share system appears less successful. This is probably not because the basic idea of A/B shares is flawed, but rather because the choice of a 90/10 split between A and B shares appears to create too few B shares to have any significant effect on prices of crab and allow flexibility to harvesters. It also seems to provide too few B shares to make the possibility of any entry by an independent processor likely. As we explain later, the inability of B shares to provide these opportunities is as much due to the small size of the current total allowable catch (TAC) and regionalization as to the 90/10-A/B fractional split itself.

If the Council begins a process of reconsidering its implementation of a 90/10 A/B share ratio we recommend that they look closely at the following possible changes. Though none of these are without their own problems and complications, we believe that some combination of them would alleviate much of the contention that exists surrounding these issues.

1. Change the fractional split from 90/10 to 80/20, 70/30, 60/40, or even lower and consider the possibility of making the fraction dependent on the size of the TAC and/or applying different fractions for different fisheries and regions.

2. Allow the A /B distinction to be applied to the transferable quota share (QS) and thus create separately transferable A share QS and B share QS that could be permanently bought

and sold as distinct entities. Right now only the annual poundage allocation can be split and exchanged (leased). This would allow particular harvesters the opportunity to accumulate B shares and specialize, and others to accumulate A shares and be rid of any B share issues.

3. Implement an over/under-marketing provision that allows harvesters and processors to miss their quota allocation by a small amount. Under this proposed provision they could draw on their future IFQ or IPQ allocations, or carryover a small amount of the current year's allocation to augment next year's allocation. This approach to overage has been used effectively in at least two federally mandated agricultural programs.

4. Allow processors to accumulate greater amounts of A share QS and effectively vertically integrate, freeing greater quantities of B shares for unaffiliated harvesters.

The 90/10 Experience

We have been privy to numerous anecdotes and some limited data sets that pertain to the 90/10 A/B share split. It appears that B shares have failed to provide much price leverage in the marketplace, to give harvesters much delivery flexibility or to attract any new processors. They have also sometimes made matching and delivery more complex. It seems likely that most B shares are simply landed in deliveries along with A shares. In at least some situations processors have refused to accept B shares and often B shares have been landed as fractional loads for matching purposes. Though there has been some discussion that B shares are being used excessively to account for deadloss, processor data seem to refute that. It is probably also true that the size of total deadloss, relative to all harvest is small, and that the B share component of

deadloss is very small. The fact that any B shares show up in deadloss at all suggests that B shares are not more valuable than A shares. If B shares provided harvesters with flexibility and significantly higher prices, we would expect to see only A shares in the deadloss category. Moreover, there have been no sales of IPQ to speak of, and only one independent processor (Harbor Crown) has entered the market to process B shares.

A number of questions arise from all of these observations: Why haven't B shares generated higher prices than A shares? Why hasn't there been more entry by new processors? Does the existence of B shares really provide flexibility for harvesters? Why would harvesters use any B shares against deadloss? Why do B shares lease at the same rate as A shares? The answer to most of the questions is likely that the quantity of B shares is not large enough to generate any of this activity.

Tables 1 and 2 show the allocations of share types in the Bristol Bay Red King Crab fishery and the Bering Sea Opilio fishery for the two fishing years since rationalization, 2005-6 and 2006-7. Class B shares make up just over or just under nine percent of the TAC in each of the fisheries.

Table 1. IFQ Allocation by Share Type (2005-2006)

Fishery	Catcher vessel			Catcher processor		Total
	Owner					
	Class A	Class B	Captain/ crew	Owner	Captain/ crew	
Bristol Bay Red King Crab	13,776,637	1,513,451	480,493	729,366	17,380	16,517,327
Bering Sea *C. opilio*	26,545,558	2,948,640	966,892	2,967,441	59,366	33,487,897

Source: 18-Month Review, Bering Sea and Aleutian Islands crab fisheries, March 2007[a]

Table 2. IFQ Allocation by Share Type (2006-2007)

Fishery	Catcher vessel			Catcher processor		Total
	Owner					
	Class A	Class B	Captain/ crew	Owner	Captain/ crew	
Bristol Bay Red King Crab	11,647,090	1,294,110	402,768	615,655	14,669	13,974,292
Bering Sea *C. opilio*	26,121,324	2,902,364	929,338	2,898,453	57,982	32,909,461

Source: 18-Month Review, Bering Sea and Aleutian Islands crab fisheries, March 2007

Table 3 shows the actual landing data for the 2005-6 season for the two fisheries. It shows that B shares were landed at a rate of about 9.6 percent of the harvest. Data on the 2006-7 seasons are not available.

Table 3. Catcher vessel landings by share type (2005-2006).

Fishery	Catcher vessel landings							Catcher vessel IFQ allocation	Percent of catcher vessel IFQ harvested
	A shares		B shares		C shares		Total		
	pounds	as percent of all landings	pounds	as percent of all landings	pounds	as percent of all landings			
Bristol Bay red king crab	13,689,235	87.5	1,496,448	9.6	454,266	2.9	15,639,949	15,749,357	99.3
Bering Sea *C. opilio*	26,131,999	87.3	2,894,774	9.7	896,434	3.0	29,923,207	30,445,647	98.3

Source: 18-Month Review Bering Sea and Aleutian Islands crab fisheries, March 2007

Though the number of B share pounds looks large both in the allocation of IFQ tables and the landings table, the B shares need to be large enough on a per vessel basis to make decision making based on B shares important. First consider Table 4. It shows the average number of B shares per vessel for the entire fleet. In the 2005-6 BBR fishery the overall average was 16,814 pounds per vessel. For BSS the average was 40,205 pounds. These underestimate the total poundage on unaffiliated vessels but we are not privy to the poundage described in that way.

Table 4. IFQ Allocation of B Shares per vessel (in pounds).

Fishery	IFQ Allocation B Shares	Number of vessels	B Shares per vessel
Bristol Bay red king crab	1,496,448	89	16,814
Bering Sea C. opilio	2,894,774	72	40,205

Source: Bering Sea and Aleutian Islands Crab Rationalization Program Report, crab fishing year 2005-2006.[b]

Table 5 describes the average pounds per landing for all shares in each of the fisheries. The average in the BBR is 60,386 and the average in the BSS fishery is 98,432. These probably underestimate the size of full vessel loads in each of the fisheries because loads are often split up for more than one recorded landing, but again we are not privy to more detailed data.

Table 5. Average pounds per landing for all shares

Fishery	Total harvest	Number of landings	Average pounds per landing
Bristol Bay red king crab	15,639,949	259	60,386
Bering Sea *C. opilio*	29,923,207	304	98,432

Source: Bering Sea and Aleutian Islands Crab Rationalization Program Report, crab fishing year 2005-2006.

On a per vessel basis (and admitting that these numbers would change with access to the detailed landings files), in 2005-2006 each vessel had only a fraction of a full load of B share crab in each of these fisheries: 28 percent of a full load in the Bristol Bay Red King Crab Fishery and 41 percent of a full load in the Bering Sea Opilio fishery. Table 6 shows the actual sold crab in the same fisheries. Even though some trading took place, the median vessel harvests of B share crab was even less than 28 and 41 percent of a full load. NOTE: These percentages are TAC dependent. They would be higher with a higher TAC and lower with a lower TAC. We come back to this last point later. Note also that we are using mean landing size as a full load measure. This certainly is an underestimate of a full load because landings data include multiple landings for single, full load trips. Access to the actual data would give a more accurate measure of the average "full load" capacity in the fleet.

Table 6. Sold B share crab (in pounds) harvested by vessels harvesting any B share crab (2005-2006).

Fishery	Mean vessel Harvest	Median vessel harvest	Average of highest four vessel harvests
Bristol Bay red king crab	24,843	16,579	105,427
Bering Sea C. opilio	61,153	39,553	272,206

Source: 18-Month Review, Bering Sea and Aleutian Islands crab fisheries, March 2007

Why is this approach to looking at B shares important? The reason is that in order for harvesters to be able to generate extra value from B shares it needs to be economically advantageous to do so. It would appear that having 30 to 40 percent of a load of B share is not enough. Why? It is probably easier to consider what opportunities would make B shares valuable.

Consider first the potential for increased prices for B shares. (See Table 7, below.) In the 2005-2006 season B share crab brought approximately 10 cents more per pound for red crab and 5 cents more per pound for opilio. In 2005-2006, even if the median harvester saved all his B shares and was able to find a processor to take them at the increased price, he would have gained only $1,600 in revenues for Red crab and $2,000 dollars for opilio. It is likely that fuel costs alone would keep most vessels from trying to shop their crab with only 30% to 40% of a full load. If the TAC had been four times bigger, the price differential between A and B shares larger, or the A/B split 70/30 or 60/40, the economic incentive to shop B crab would be larger and such activity more likely.

Table 7. Average ex vessel payment at the time of landing by fishery and share type, 2005-2006 season (dollars per pound)

Fishery	Average ex vessel price of landings of		
	A shares	B shares	C shares
Bristol Bay red king crab	4.372	4.479	4.492
Bering Sea *C. opilio*	0.904	0.956	0.965

Source: 18-Month Review, Bering Sea and Aleutian Islands crab fisheries, March 2007

Consider next the other dimension of B shares. B shares can be delivered anywhere and to any processor. If a harvester is committed to delivering A share in a particular region and possibly on a set schedule, the incentive to take a partial load elsewhere is reduced. That is because when a load is a mixed A/B load it will likely often make sense to simply offload B shares with the A shares. Again if there were a larger TAC, a larger price differential or a larger percentage of the harvest allocated to B shares, the economic incentive to deliver elsewhere or search for a higher price would increase. The smaller the fraction of a load is the B share component, the less likely there will be incentives to use B share for any of its intended uses. In fact, with small TAC's or small percentages of B shares relative to A shares, B shares can be a detriment rather than a asset. That was likely the case when processors refused to take B shares and harvesters needed to search for outlets for very small quantities of B share crab. Similarly, the small quantity of B shares prevented harvesters from landing crab in other places when the Steller Sea fire halted processing in the Northern opilio fishery during the 2006-2007 season. Had harvesters been able to go elsewhere with full loads of B shares instead of mixed A/B share loads or all A share loads, they could have avoided some of the delay and sped up their seasons.

The other consideration here is processor entry. No processor is going to enter the market unless he thinks he is going to be able to get a sufficient amount of crab to justify entry. When very small amounts of B shares are scattered throughout the fleet it makes doing this much harder. Certain circumstances would make entry more likely: a high price differential between A and B shares (inasmuch as harvesters will spend more time looking for B share processors), a

large TAC that would make more B shares available, or a higher B to A share ratio that would likewise make more B shares available.

It is likely that small price differences between A and B shares (possibly caused by lack of B shares), the small TAC and the low B to A share ratio have caused B shares to not perform the functions for which they were designed.

80/20, 70/30, 60/40, 50/50?

So what is the A/B share ratio that would allow harvesters to use B shares in the way they were intended? We don't know. We have seen NO theoretical, empirical or ad hoc justification for a particular ratio nor have we been able to devise one. The choice of 90/10 was arbitrary and clearly on the far end of the spectrum. We have been able to find no discussion in any part of the history of this program that gives an explanation for adopting 90/10 over any other ratio. What is clear is that 90/10 favors processors over harvesters relative to any smaller (A/B) ratio and that 90/10 is too large an A/B ratio, at least with these size TACs, to provide harvesters alternative pricing opportunities, even occasional landing flexibility, or the prospect of seeing more independent processors with new marketing ideas enter the market.

What could be done that would increase the probability of B shares having real value to harvesters? There are a number of possibilities. One is to increase the number of B shares in the market. This means decreasing the A/B ratio generally or making it somehow dependent on the TAC. Under current TAC's the ratio would have to decrease to 70/30 in the Bering Sea Opilio fishery and 60/40 in the Bristol Bay Red Crab fishery to give vessels an average of one full load

of B shares per season. This approach, which would give full loads of B shares to unaffiliated harvesters, is the most straightforward way of addressing the issue. (Though it might seem that there is nothing magical about a full-load B share allocation, less than a full load clearly implies delivering less crab for one trip or having a mixed A/B share trip. Both imply higher costs per pound harvested.) A corollary to simply decreasing the A/B would be to allow for different A/B ratios in different regions and fisheries to account for the peculiarities of each region and fishery.

Another possibility is to provide mechanisms to allow more B shares to be concentrated at lower costs. This includes dividing QS into A share QS and B share QS, each which could be bought and sold separately. This would allow harvesters to plan for long term specialization in A or B shares and develop business models that exploit each market.

Similarly, allowing processors to purchase more A shares would concentrate B shares in smaller numbers of vessels and increase the fraction of a load in unaffiliated vessels. We see little drawback to this type of vertical integration for either processors or harvesters.

Lastly, by implementing an over/under-marketing provision that allows harvesters and processors to miss their quota allocation by a small amount and either draw on their future IFQ or IPQ allocations, or carryover a small amount of the current year's allocation to augment next year's allocation, B shares would be less likely to be used for overage and deadloss.

Processor Effects

We would be remiss if we ignored the effects of any changes in the 90/10 ratio on processors. Processors currently have established property rights to process A shares in the fishery. The value of those rights is surely dependent on the 90/10 A/B ratio and on the lack of

price competition and processor entry caused by the relatively small number of B shares. Though trading in IPQ is almost non-existent (and one processor told us he "couldn't give them away") we assume they have value. Any policy change that either decreased A shares or increased the functionality of B shares could have the effect of lowering the value of IPQ. If the Council determines that the A/B share ratio is not having its intended effect and processor compensation is not required, the lower value for IPQ would be a moot point. If the Council determines that the processors deserve compensation, then it would make sense that processors seek compensation either monetarily, or through a regulatory change that they found advantageous. Increasing the percentage of QS they could own is an example of a regulatory type of mitigation. Lastly, it is likely that processors will look upon entry of any new processing capacity negatively. Though entry could have a positive effect on ex-vessel prices, it is also possible that innovative marketing by new, small independents will drive up all wholesale prices and benefit all participants in the fishery.

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[b] Bering Sea and Aleutian Islands Crab Rationalization Program Report, Crab Fishing Year 2005-2006, Alaska Region, NOAA Fisheries (NMFS). 2006. 1-32.

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SUMMARY

Over 20 years' experience as a consultant in economic and statistical analyses, damage calculations, mediation, and settlement administration. Testimony given in court, by deposition and by affidavit in Federal and State proceedings throughout the West. Six years experience in the software/Internet industry as founder and CEO. Led initial development and took company public, raising over eighty-million dollars. Thirteen years as a university professor teaching both MBA and Economics courses.

EXPERIENCE

Nickerson & Associates, Seattle, WA **1978 –Present**

Principal and President of Economics and Statistics consulting firm.

- Direct and manage consulting engagements for law firms and their clients involved in litigation relating to labor and employment issues, natural resources, and commercial transactions. Work includes mediation preparation, damages estimation, statistical and economic analyses and public policy analyses.
- Served as Settlement Administrator in class action cases and as such responsible for notification of class members, damage calculations, award distribution and general administration.
- Testified in numerous cases; qualified as expert in Federal and State Courts in Oregon, Washington and Alaska.
- Engaged to analyze legislative and administrative decisions as they effect public policy and potential liability.
- Taught and presented various aspects of the economics of child support, economic damages, and expert preparation to Washington State Judges Conferences, National Institute for Trial Advocacy, Pacific Coast Labor Conference, MALDEF.
- Supervise and manage five fulltime professionals and support staff and various contract professionals as needed.

N2H2, Incorporated **1995 – 2001**

Chief Executive Officer, President and Founder of Internet content management business.

- Grew Internet company from inception to over $10 million in annual sales and 250 employees, selling computer services to over 40% of K-12 education base in the U.S. and Australia and to businesses and educational institutions in thirteen other countries.
- Raised $15 million in private capital and led company through a $60 million public offering.
- As CEO made scores of presentations in public forums, investment conferences, education conferences and computer conferences about internet content management, computer use in schools and business, Internet content technology.
- Led numerous company initiatives and teams encompassing virtually all aspects of company functions including development, product management, customer service marketing and finance.
- Remain Chairman of the Board of Directors.

Seattle University, Seattle, WA **1984 - 1997**

Visiting Assistant, Assistant and ultimately Associate Professor for the Department of Economics and Finance, Albers School of Business and Economics, Seattle University. Tenured in 1991.

- Taught graduate and undergraduate courses in micro- and macro-economics, industrial organization, natural resources and environmental economics.
- Served on numerous university, school and departmental committees; Created, raised funding and managed the University Adult Literacy Project; Created and served on the Board of the University Children's Literacy Project.
- Published various articles on resources, child support and taxation in refereed journals, proceedings and newspapers; served as session chair, discussant and paper presenter at various professional conferences.
- Awarded Albers School of Business faculty research award and School of Business summer research grants

University of Washington, Seattle, WA **1976 – 1983**

- Teaching Associate, Department of Economics and the School of Business, University of Washington.
- Research Assistant, Department of Economics and Institute of Marine Sciences, University of Washington.

EDUCATION

UNIVERSITY OF WASHINGTON, SEATTLE, WA

- Ph.D. in Economics — 1984
  Fields of concentration were microeconomics, natural resources and public finance. Research in natural resources and lottery allocation systems as they function as pricing mechanisms.

- Master of Science in Economics — 1978
  Major coursework in macro and micro economic theory, econometrics, and natural resources. Estimated demand for recreational shellfish resources for Institute for Marine Sciences.

WASHINGTON STATE UNIVERSITY, PULLMAN, WA

- B.A. in Economics and Business — 1975

STEVENS INTITUTE OF TECHNOLOGY, HOBOKEN N.J.

- Engineering major — 1970 – 1972

DIRECTORSHIPS

Chairman of the Board, N2H2, Incorporated, 1995 – present.

Chairman of the Board, Iseek Limited, Brisbane Australia, 2000 – 2001.

Board of Directors, One Name Corporation, Seattle, WA 2000 – 2001.

August 2001

Randal R. Rucker

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EDUCATION:

- **Ph.D., Economics**, University of Washington, 1984.
- **M.S., Applied Economics**, Montana State University, 1980.
- **B.S., Economics**, Montana State University, 1977.

EXPERIENCE:

- Full Professor, Department of Agricultural Economics and Economics, Montana State University, 1996-present.
- Associate Professor, Department of Agricultural Economics and Economics, Montana State University, 1991-1996.
- Associate Professor, Department of Agricultural and Resource Economics, N.C. State University, 1990-1991.
- Associate Professor, Department of Economics and Business, N.C. State University, 1990-1991.
- Assistant Professor, Department of Economics and Business, N.C. State University, 1984-1990.
- Associate Appointment, Department of Forestry, N.C. State University, 1990-1991.
- Economist, Department of Interior, 1984.
- Research Fellowship, Sloan Foundation Grant for Study of the Regulation of Natural Resources, 1983.
- Research Assistant, University of Washington, 1980-1981.
- Instructor, University of Washington, 1979-1983.
- Research Associate, Montana State University, 1976, 1979, 1980, 1981.

PERSONAL DATA:

- Home Address: 9986 Happy Acres West, Bozeman, MT 59718
- Date of Birth: 04/13/54
- Status: Married, 3 children
- Citizenship: U.S.A.

PROFESSIONAL ACTIVITIES:

Fields:

- Applied Microeconomics/Regulation/Contracting
- Agricultural Economics
- Natural Resource/Forestry Economics

Teaching Experience:

- Principles
- Microeconomics (undergraduate, Master, and Ph.D.)
- Natural Resource Economics (graduate)

- Labor Economics
- Agricultural Marketing & Agricultural Policy

Professional Memberships:

- American Economic Association
- American Agricultural Economics Association
- Western Economics Association
- Western Agricultural Economics Association

Referee for:

- American Economic Review
- Journal of Law, Economics, and Organization
- National Science Foundation
- Journal of Law and Economics
- Review of Economics and Statistics
- Journal of Environmental Economics and Management
- American Journal of Agricultural Economics
- Land Economics
- International Review of Economics and Finance
- Western Journal of Agricultural Economics
- Forest Science
- Journal of Institutional and Theoretical Economics
- Social Science Quarterly
- Review of Agricultural Economics
- Scandinavian Journal of Economics
- Canadian Journal of Forest Resources

Associate Editor for:

- Forest Science (1993-1995)
- American Journal of Agricultural Economics (1993-1997)

PUBLICATIONS:

Refereed Journal Articles:

- "Transaction Costs and Cattle Marketing: The Information Content of Seller-Provided Data at Cattle Auctions," with Jan Chvosta and Myles Watts, *American Journal of Agricultural Economics*, 2001, 83(2): 286-301.
- "Transaction Costs and the Collection of Information: Presale Measurement on Private Timber Sales," with Keith B. Leffler and Ian A. Munn, *Journal of Law, Economics, and Organization*, 2000, 16(1): 166-188.
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- Rucker, Randal R., Walter N. Thurman and Daniel A. Sumner, "Restricting the Market for Quota: An Analysis of Tobacco Production Rights with Corroboration from Congressional Testimony," *Journal of Political Economy*, 1995, 103(1): 142-175.
- Johnson, Ronald N., Randal R. Rucker, and Holly L. Lippke, "Expanding U.S. Log Export Restrictions: Impacts on State Revenues and Policy Implications," *Journal of Environmental Economics and Management*, 1995, 29: 197-213.

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- Leffler, Keith B., and Randal R. Rucker, "Transaction Costs and the Efficient Organization of Produc-tion: A Study of Timber-Harvesting Contracts," *Journal of Political Economy*, 1991, 99(5):1060-1087.
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- Franklin, Carlyle, Dennis Hazel, Randal R. Rucker, and Gary Kronrad, "Thinning and Harvest Regimes for Yellow Poplar," *Southern Journal of Applied Forestry*, 1990, 14(3): 101-103.
- Rucker, Randal R., "The Effects of State Farm Relief Legislation on Private Lenders and Borrowers: The Experience of the 1930s," *American Journal of Agricultural Economics*, 1990, 72(1): 24-34.
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- Rucker, Randal R., and L.J. Alston, "Farm Failures and Government Intervention: A Case Study of the 1930s," *American Economic Review*, 1987, 77(4): 724-30.
- Rucker, Randal R., and R.H. Nelson, "Federal Timber Sales Procedures: The Need for Reform," *Western Journal of Applied Forestry*, 1987, 2(1): 30-33.
- Rucker, Randal R., O. Burt, and J.T. LaFrance, "An Econometric Model of Cattle Inventories," *American Journal of Agricultural Economics*, 1984, 66(2): 131-44.

Published Abstracts:

- "The Information Content of Seller-Provided Presale Data in Cattle Auctions," with Jan Chvosta and Myles Watts, *Journal of Agricultural Economics*, December 1997 (forthcoming).
- "Indian and Non-Indian Salmon Fisheries: The Economic Effects of U.S. v. Washington," Peter H. Nickerson and Randal R. Rucker, *American Journal of Agricultural Economics*, December 1994.
- "U.S. Log Export Restrictions: Impacts and Welfare Implications," Ronald N. Johnson, Randal R. Rucker, and Holly L. Lippke, *American Journal of Agricultural Economics*, December 1993.
- "Presale Measurement in a Competitive Auction Framework: Cruising Expenditures on Private Timber Sales," Keith B. Leffler, Randal R. Rucker, and Ian A. Munn, *American Journal of Agricultural Economics*, December 1993.
- "The Value of Information Services in a Market for Factors of Production with Multiple Attributes: The Role of Consultants in Private Timber Sales," Ian A. Munn and Randal Rucker, *American Journal of Agricultural Economics*, December 1992.
- "The Side Effects of Supply Controls: Export Market Effects of Domestic Peanut Policy," Randal R. Rucker and Walter N. Thurman, *American Journal of Agricultural Economics*, December 1991.
- "Production Rights with Limited Transferability: A Case Study of the U.S. Tobacco and Peanut Programs," Randal R. Rucker, Walter N. Thurman, and Daniel A. Sumner, *American Journal of Agricultural Economics*, December 1990.
- "An Economic Analysis of the Determinants of Farm Failure Rates: 1912-1980," Lee J. Alston, Jeffrey T. LaFrance, and Randal R. Rucker, *American Journal of Agricultural Economics*, December 1989.
- "The Effects of State Farm Relief Legislation on Private Lenders: The Experience of the 1930s," Randal R. Rucker and Lee J. Alston, *American Journal of Agricultural Economics*, December 1987.

Papers in Collection:

- Rucker, Randal R., and Daniel A. Sumner, "Agriculture and Business Cycles," in *Encyclopedia of Business Cycles, Panics, Crashes and Depressions*, edited by David Glasner, Garland Publishing, Inc., 1997.
- Rucker, Randal R., Walter N. Thurman, and Robert B. Borges, "GATT and the U.S. Peanut Market," in Regulations and Protectionism Under GATT and NAFTA: Case Studies in North American Agriculture, Andrew Schmitz, ed., Westview Press, 1996.
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- Rucker, Randal R., Walter N. Thurman, and Daniel A. Sumner, "An Economic Analysis of the Effects of Eliminating Restrictions on the Transfer of Tobacco Quota," in *Current Issues in Tobacco Economics*, Vol. 4, Tobacco Merchants Association of the United States, Inc., Princeton, NJ, 1991.
- Rucker, Randal R., and Price Fishback, "The Federal Reclamation Program: An Analysis of Rent-Seeking Behavior," by Terry Anderson, ed., *Water Rights: Scarce Resource Allocation, Bureaucracy and the Environment*, Pacific Institute for Public Policy Research, 1983.

Monographs, Research Reports, and Miscellaneous Publications:

- Chvosta, Jan, Randal R. Rucker, and Walter N. Thurman, "Texas Post-FAIR: The Big get Bigger and the Small Decline," *The Peanut Farmer*, May 2001, pp.10-11.
- Chvosta, Jan, Randal R. Rucker, and Walter N. Thurman, "Post-FAIR: How has Peanut Production Changed since 1996?" *The Peanut Farmer*, April 2001, pp. 14-15.
- Rucker, Randal R., Walter N. Thurman, and Robert B. Borges, "The Effects of the Uruguay Round GATT on U.S. Peanut Markets," CARD GATT Research Paper Series, #92-GATT 23, Iowa State University, July 1994.
- Rucker, Randal R., "Estimating the Economic Benefits to the Wood Products Industry of Reductions in Ambient Ozone Levels," written for the U.S. Environmental Protection Agency, August 1988.
- Rucker, Randal R., M. Copeland and R. Stroup, "Estimation of Amenity Values as Opportunity Costs for Energy Related Water Use in Montana," Montana University Joint Water Resources Research Center, Report No. 81, October 1976.

Book Reviews:

- Rucker, Randal R., Review of Plowing Ground in Washington: The Political Economy of U.S. Agriculture (written by B. Delworth Gardner), in ***The Independent Review: A Journal of Political Economy***, Summer 1997, pp. 139-143.
- *The Timber Bubble that Burst: Government Policy and the Bailout of 1984* by Joe P. Mattey. *Forest Science*, cowritten with W.F. Hyde, February 1992, 38(1): 211-212.

- *Rivers of Empire: Water Aridity, and the Growth of the American West* by Donald Worster. *Journal of Economic History*, 1986, 46(4): 1099-1100.

Departmental and Other Publications:

- Rucker, Randal R., Walter N. Thurman, and Jonathan Yoder, "Market Events and Lumber Futures Prices: Estimating the Speed of Market Reaction to News," *Staff Paper 2000-9*, Dept. of Agricultural Economics and Economics, Montana State University, Bozeman, MT, November 2000.
- Chvosta, Jan, Randal R. Rucker, and Myles Watts, "Transaction Costs and Cattle Marketing: The Information Content of Seller-Provided Data at Cattle Auctions," *Staff Paper 2000-7* (revision of Staff Paper 97-3), Dept. of Agricultural Economics and Economics, Montana State University, Bozeman, MT, February 2000.
- Anderson, Terry L., Daniel K. Benjamin, Peter Malishka, and Randal R. Rucker, "Private Leasing of Public Resources: The Effects of Changes in Property Rights Regimes at the Bureau of Reclamation's Canyon Ferry Cabin Program," Staff Paper No. 98-2, Dept. of Agricultural Economics and Economics, Montana State University-Bozeman, December 1998.
- Leffler, Keith B., Randal R. Rucker, and Ian A. Munn, "Transaction Costs and the Collection of Information: Presale Measurement on Private Timber Sales," Staff Paper No. 98-1, Dept. of Agricultural Economics and Economics, Montana State University-Bozeman, December 1998.
- Munn, Ian A. and Randal R. Rucker, "Predicting Forestry Consultant Participation Based on Hedonic Characteristics of the Sale," Staff Paper No. 97-4, Dept. of Agricultural Economics and Economics, Montana State University-Bozeman, March 1997.
- Chvosta, Jan, Randal R. Rucker, and Myles Watts, "The Information Content of Seller-Provided Presale Data in Cattle Auctions," Staff Paper No. 97-3, Dept. of Agricultural Economics and Economics, Montana State University-Bozeman, August 1997.
- Muth, Mary, Walter N. Thurman, Randal R. Rucker, and Ching-Ta Chuang, "The Fable of the Bees Revisited: A Post Mortem of the U.S. Honey Program," Staff Paper No. 97-5, Dept. of Agricultural Economics and Economics, Montana State University-Bozeman, April 1997.
- Rucker, Randal R., and Brenda L. Brenner, "An Analysis of Bidding Behavior at U.S. Forest Service Timber Auctions," Staff Paper No. 96-3, Dept. of Agricultural Economics and Economics, Montana State University-Bozeman, December 1996, pp. 134.
- "Transaction Costs and the Collection of Information: Presale Measurement on Private Timber Sales," (with Keith B. Leffler and Ian A. Munn), Discussion Paper Series #95-02, Institute for Economic Research, University of Washington, January 1995.
- "The Economic Effects of Restricting the Transfer of Production Rights," (with Walter N. Thurman and Daniel A. Sumner), Staff Paper 93-10, Department of Agricultural Economics and Economics, Montana State University, October 1993.
- "An Economic Analysis of the Differences Between Bid Prices on Forest Service and Private Timber Sales," (with Ian Munn), Staff Paper 93-9, Department of Agricultural Economics and Economics, Montana State University, September 1993.
- "U.S. Log Export Restrictions: Impacts and Welfare Implications," (with Ronald N. Johnson and Holly L. Lippke), Staff Paper 93-7, Department of Agricultural Economics and Economics, Montana State University, May 1993.
- "The Value of Information Services in a Market for Factors of Production with Multiple Attributes: The Role of Consultants in Private Timber Sales" (with Ian Munn), Staff Paper 93-5, Department of Agricultural Economics and Economics, Montana State University, April 1993.

- "The Political Economy of Restrictions on the Transfer of Production Rights: A Case Study of the U.S. Flue-Cured Tobacco Program," Staff Paper 92-9, Department of Agricultural Economics and Economics, Montana State University, October 1992.
- Rucker, Randal R., and Raymund Fabre, "Lease Rates and Sale Prices for Peanut Poundage Quota: 1978-1987," Economic Information Report No. 78, Department of Economics and Business, North Carolina State University, February 1989.
- Rucker, Randal R., and Walter N. Thurman, "The Economic Effects of Supply Controls: The Simple Analytics of the U.S. Peanut Program," Working Paper no. 123, Department of Economics and Business, North Carolina State University, May 1988.
- Rucker, Randal R., "The U.S. Peanut Program: History and Recent Changes," *Tar Heel Economist*, N.C. Agricultural Extension Service, N.C. State University, February 1988.
- Rucker, Randal R., "The Effects of State Farm Relief Legislation on Private Lenders: The Experience of the 1930s," Working Paper No. 101, Department of Economics and Business, North Carolina State University, May 1987.
- Rucker, Randal R., "Historical Trends in Farm Failures," *Tar Heel Economist*, N.C. Agricultural Extension Service, N.C. State University, October 1986.
- Rucker, Randal R., "Causes of Farm Failures and Effectiveness of Government Programs in Alleviating Stress," *Tar Heel Economist*, N.C. Agricultural Extension Service, N.C. State University, October 1986.
- Rucker, Randal R., "Forecasts of North Carolina Agricultural Commodity Prices and Yields, 1985-2030," Economics Special Report No. 92, Department of Economics and Business, North Carolina State University, September 1986.
- Rucker, Randal R., and Lee Alston, "The Effectiveness of Government Policies to Alleviate Agricultural Distress: A Case Study of the 1930s," Working Paper No. 85, Department of Economics and Business, North Carolina State University, June 1986.
- Rucker, Randal R., and Keith Leffler, "To Harvest or Not to Harvest? An Analysis of Cutting Behavior on Federal Timber Sales Contracts," Working Paper No. 86, Department of Economics and Business, North Carolina State University, June 1986.

HONORS AND AWARDS:

- American Agricultural Economics Association Award for Quality of Research Discovery, 1996.
- Western Agricultural Economics Association Award for Outstanding Published Research (Honorable Mention), 1996.
- American Agricultural Economics Association Award for Outstanding Master's Thesis, 1980.
- Western Agricultural Economics Association Award for Outstanding Master's Thesis (Honorable Mention), 1980.
- Outstanding Academic Achievement, Montana State University, 1977.

CURRENT RESEARCH:

- "The Fable of the Bees Revisited: Causes and Consequences of the U.S. Honey Program," with Walter N. Thurman, Mary Muth and Ching-Ta Chuang, May 2001. Currently under review at the *Journal of Law and Economics*.
- "Estimating the Speed of Market Reaction to News: Market Events and Lumber Futures Prices," with Jonathan Yoder and Walter Thurman, May 2001. Currently under review at the **Review of Economics and Statistics**.
- **Agriculture and the State**, with E. C. Pasour, Jr., 2nd edition. Currently under review at the Independent Institute.

- "By the Pound or By the Each? The Role of Transaction Costs in Fresh Produce Pricing," with Keith B. Leffler and Peter Malishka, June 2001.
- "An Empirical Analysis of Honeybee Pollination Markets," with Walter N. Thurman and Michael Burgett, May 2001.
- "Peanut Quota Markets and Peanut Production After FAIR," with Walter N. Thurman and Jan Chvosta, May 2001.
- "The Choice Among Sales Procedures: Auction vs. Negotiated Sales of Private Timber, with Keith Leffler and Ian Munn, May 1999.
- "Private Leasing of Public Resources: The Effects of Changes in Property Rights Regimes at the Bureau of Reclamation's Canyon Ferry Cabin Program,?" with Terry Anderson, Daniel K. Benjamin, and Peter Malishka, November 1998.
- "Endogenous Policy Dynamics, the Visibility of Rents, and Changes in the Transferability of Production Rights: The Case of Flue-Cured Tobacco."
- "Transaction Costs versus Risk Aversion in Contract Choice: An Examination of Private Oil Leasing Practices," with Keith Leffler and Geoff Black, February 1996.
- "Indian and Non-Indian Salmon Fisheries: The Economic Effects of U.S. v. Washington," with Peter H. Nickerson, December 1994.
- "An Economic Analysis of the Determinants of Alaskan Salmon Permit Prices," with Peter H. Nickerson, in progress.
- "The Economics of Artificial Insemination Regulations in the Equine Breeding Industry," with Daniel K. Benjamin and Valerie A. Thresher, in progress.
- "An Economic Analysis of Changing Appraisal Methods on Forest Service Timber Sales," with Brenda Brenner.
- "The Effects of Changes in the Wheat Program on Farmland Prices," with Lee J. Alston, in progress.

GRANTS:

- USDA, NRI Competitive Grants Program: Grant to study the causes and consequences of the U.S. honey program and the economics of pollination markets, 2001-2004, $135,000.
- National Science Foundation Grant: Grant to study the choice among sales procedures (auction vs. negotiated) for private timber and for cattle, 1998-2001, $102,039.
- USDA, NRI Competitive Grants Program: Grant to study the impacts of policies regarding the transfer of production rights in quota-based commodity programs, 1998-2001, $52,000.
- Cooperative Agreement with U.S. Forest Service: Grant to study the choice among sales procedures (auction vs. negotiated) for private timber, 1997-99, $12,000.
- USDA, NRI Competitive Grants Program: Grant to study the information content of seller-provided presale data in cattle auctions, 1996-1999, $54,047.
- Trade Research Center, MSU-Bozeman: Grant to study impacts of Canadian forestry policies on U.S. lumber prices, 1996-1998, $29,982.
- Cooperative Agreement with U.S. Forest Service: Grant to study the determinants of cruising practices on private timber sales, 1994-1995, $12,400.
- Political Economy Research Center: Grant to examine Indian vs. nonIndian allocations in the Washington salmon fishery (with Peter Nickerson), 1994, $1,500.
- Cooperative Agreement with U.S. Forest Service: Grant to study bidding patterns and competition on Forest Service timber sales in the West, 1993-95, $33,964.
- Political Economy Research Center: Grant to examine the determinants of lumber price movements, 1993, $1,500.

- Cooperative Agreement with the U.S. Forest Service: Grant to contrast the determinants of bid prices on private and Forest Service timber-harvesting contracts (with Ian Munn), 1991-92, $10,900.
- Political Economy Research Center: Grant to study the political economy of changes in restrictions on transferability of tobacco quota, 1991, $12,000.
- Political Economy Research Center: Grant to study the determinants of presale measurement expenditures on private timber sales, 1991, $2,000.
- Cooperative Agreement with U.S. Forest Service: Grant to study the determinants of bid prices on private timber-harvesting contracts (with Ian Munn), 1990-92, $11,900.
- Political Economy Research Center: Grant to study economic effects of restrictions on transferability of peanut and tobacco quota (with D. Sumner and W. Thurman), 1988-90, $1,500.
- Cooperative Agreement with USDA, ERS: Grant to study economic effects of restrictions on transferability of peanut and tobacco quota (with D. Sumner and W. Thurman), 1988-90, $15,000.
- USDA Research Apprenticeship Program (with M. Walden), 1988.
- Political Economy Research Center: Grant for the study of private timber sales contracts, 1986-87, $2,000.

SEMINARS AND PRESENTATIONS:

- "By the Pound or By the Each? The Role of Transaction Costs in Fresh Produce Pricing," Western Economics Association Annual Meetings, San Francisco, July 2001.
- "By the Pound or By the Each? An Economic Analysis of Produce Pricing Practices," Department or Agricultural and Resource Economics and Department of Economics, North Carolina State University, May 2000.
- "The Information Content of Seller-Provided Presale Data in Cattle Auctions,"Department of Economics, Northern Arizona University, Flagstaff, AZ, March 1998.
- "The Fable of the Bees Revisited: A Post Mortem of the U.S. Honey Program," National Economics Symposium, University of Arizona, Tucson, AZ, May 1997.
- "The Fable of the Bees Revisited: A Post Mortem of the U.S. Honey Program," Department of Agricultural Economics and Economics, Montana State University, Bozeman, April 1997.
- "Restricting the Market for Quota: An Analysis of Tobacco Production Rights with Corroboration from Congressional Testimony," Economic and Legal Organization Workshop, University of Chicago, February 1995.
- "Presale Measurement in a Competitive Auction Framework: Cruising Expenditures on Private Timber Sales," Department of Agricultural Economics and Economics, Montana State University, Bozeman, November 1994.
- "Indian and Non-Indian Salmon Fisheries: The Economic Effects of U.S. v. Washington," American Agricultural Economics Association Meetings, San Diego, August 1994.
- "The Effects of the Uruguay Round GATT on U.S. Peanut Markets," Conference on Canadian Supply Management in Transition Towards the 21st Century, McGill University, St. Anne De Bellevue, Quebec, June 1994.
- "U.S. Log Export Restrictions: Impacts and Welfare Implications," American Agricultural Economics Association Meetings, Orlando, Florida, August 1993.
- "Presale Measurement in a Competitive Auction Framework: Cruising Expenditures on Private Timber Sales," American Agricultural Economics Association Meetings, Orlando, Florida, August 1993.
- "Presale Measurement in a Competitive Auction Framework: Cruising Expenditures on Private Timber Sales," Western Economic Association Meetings, Lake Tahoe, Nevada, June 1993.

- "The Economic Effects of Restricting the Transfer of Production Rights under Quota-Based Commodity Supply Control Programs," Department of Agricultural Economics and Economics, Montana State University, April 1993.
- "The Political Economy of Restrictions on the Transfer of Production Rights: A Case Study of the U.S. Flue-Cured Tobacco Program," Western Economic Association Meetings, San Francisco, July 1992.
- "Transaction Costs and the Efficient Organization of Production: A Study of Timber-Harvesting Contracts," Department of Agricultural Economics, University of Arizona, November 1990.
- "Transaction Costs and the Efficient Organization of Production: A Study of Timber-Harvesting Contracts," Department of Agricultural Economics and Economics, Montana State University, October 1990.
- "Transaction Costs and the Efficient Organization of Production: A Study of Timber-Harvesting Contracts," Albers School of Business, Seattle University, October 1990.
- "Production Rights with Limited Transferability: A Case Study of the U.S. Tobacco and Peanut Programs," Annual AAEA meetings, Vancouver, B.C., August 1990.
- "Production Rights with Limited Transferability: A Case Study of the U.S. Tobacco and Peanut Programs," Agricultural Economics Workshop, NCSU, July 1990.
- "Timber-Harvesting Contracts: The Effects of Contract Terms and Sales Procedures on Revenues and Purchaser Incentives," World Bank, Washington, D.C., May 1990.
- "An Economic Analysis of the Determinants of Farm Failure Rates, 1912-1980," Agricultural Economics Workshop, NCSU, April 1990.
- "An Economic Analysis of the Determinants of Farm Failure Rates, 1912-1980," Department of Economics and Agricultural Economics, Montana State University, March 1990.
- "Transaction Costs and the Efficient Organization of Production: A Study of Timber-Harvesting Contracts," Economic and Legal Organization Workshop, University of Chicago, November 20, 1989.
- "Transaction Costs and the Efficient Organization of Production: A Study of Timber Harvesting," National Bureau of Economic Research, Conference on Topics in Industrial Organization, Cambridge, Massachusetts, August 1989.
- "Transaction Costs and the Efficient Organization of Production: A Study of Timber Harvesting," Natural Resources/Industrial Organization Workshop, NCSU, October 1988.
- "The Economic Effects of Supply Controls: The Simple Analytics of the U.S. Peanut Program," Southern Agricultural Economics Association Annual Meetings, New Orleans, February 1988.
- "The Effects and Side Effects of Supply Controls: The Simple Analytics of the U.S. Peanut Program," Department of Economics, Clemson, October 1987.
- "The Effects of State Farm Relief Legislation on Private Lenders: The Experience of the 1930s," American Agricultural Economics Association Annual Meetings, Lansing, Michigan, August 1987.
- "The Economic Effects of the Peanut Program," Department of Economics and Agricultural Economics, Montana State University, April 1987.
- "Chapter 12: Impact on the Farm Economy," Keynote Speaker at seminar sponsored by the Center for the Study of Market Alternatives, Caldwell, ID, April 1987.
- "The Effects of State Farm Relief Legislation on Private Lenders: The Experience of the 1930s," Agricultural Economics Workshop, NCSU, January 1987.
- "The Longer View of Farm Failures," American Feed Industry Association Annual Meeting, October 1986.
- "The Dynamics of Farm Failures and the Effects of Government Relief Programs, 1925-1939," Center for Study of Public Choice, George Mason University, October 1985.
- "The Dynamics of Farm Failures and the Effects of Government Relief Programs, 1925-1939," American Agricultural Economics Association Annual Meetings, Iowa, August 1985.
- "Farm Failures During the Interwar Period," Agricultural Economics Workshop, NCSU, April 1985.

- "Are Public Timber Sales Contracts Too Short?" Forestry Economics Discussion Group, NCSU, March 1985.
- "Below Cost Timber Sales," Conference on the Future of N.C. National Forests, Duke University, November 1984.

CONSULTING EXPERIENCE

S Have worked (over the last decade) as an analyst on numerous cases with Nickerson and Associates, a Seattle consulting firm. Most of these cases have involved issues related to discrimination in labor markets and price-fixing issues.

- **Nyquist Enterprises, Inc. v Servpro Industries, Inc.** (1996-2000). Provided expert testimony on impacts of structural changes in the Servpro Franchise system.

- **Exxon Valdez Oil Spill Litigation** (1994-95). Worked with Peter H. Nickerson and Associates (Seattle). Conducted statistical analysis of determinants of prices paid for salmon fishing permits, reviewed depositions, discussed issues relating to vessel prices and various other issues.

- **Carnation v Abbott Laboratories, et al.** (1994). Worked with Economic Consulting & Research (Keith Leffler). Conducted statistcal analysis for purpose of determining the elasticity of demand for infant formula.

- **United Food and Commercial Workers Union Local 1001 and United Food and Commercial Workers Union Local 367 v. Nordstroms Inc.** (1993). Worked with Peter H. Nickerson & Associates, which was employed by a Seattle law firm (Lane, Powell, Spears, and Lubersky). Assisted with analysis of Nordstrom's employee policies on issue of off-hours work requirements.

- **U.S. v Coordinated Petroleum Products Antitrust Litigation (MDL-150,** 1992). Worked for Washington State Attorney General's Office and Economic Consulting & Research (Keith Leffler). Directed manipulation and analysis of large data sets containing information on daily gasoline sales of major oil companies for purpose of determining damages associated with alleged price fixing practices.

- **Montana Water Law Adjudication** (1991-92). Worked for Montana landowners through Bozeman, MT law firm (Moore, O'Connell, Refling & Manos). Critiqued economic study on the value of in-stream flow applications made by Montana Department of Fish, Wildlife, and Parks. Also, assisted with preparation of questions for cross examination of author of study.

- **Environmental Protection Agency** consulting project (1988). Conducted research and wrote report on estimating the benefits to the wood products industry of reductions in ambient ozone levels.

- Experience with accidental death, personal injury, and divorce settlement cases includes three local cases (one accidental death and two personal injury) within the last four years. Testimony provided in ***Julie Hansen Personal Property of the Estate of Stanley Hanson, deceased*** and ***Marriage of Marilyn Johnson and Norman Johnson, DR 94-406.***

Peter T. Malishka
Senior Economist
Nickerson & Associates
520 Pike St., Suite 1200
Seattle, WA 98101

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pmalishka@nickersonassociates.com

Summary

Peter Malishka is a partner and Senior Economist at Nickerson and Associates. Peter oversees all of the large-scale data analysis projects at Nickerson and Associates and manages a team of several data analysts. He has expertise in the construction and analysis of large, complex datasets, calculation of economic damages, statistical inference in relation to class certification and discrimination, and survey implementation and analysis.

Peter has prepared numerous expert reports in wage and hour and antitrust cases and has been involved with developing mediation strategy and providing trial support in a number of large class actions. He has developed and analyzed damage models in cases involving such industries as pharmaceuticals, tobacco, flat-glass, animal feed additives and retail sales. A particular specialty is working with payroll and time clock data related to complex wage and hour class actions.

Education

M.S. in Applied Economics
Montana State University. Bozeman, MT (May 1999)

Teaching and Research Assistant (Aug 1997 – May 1999)
Department of Economics, Montana State University

Graduate Research Fellow (May 1998 – June 1999)
Property and Environment Research Center. Bozeman, Montana

B.A. in Politics, Philosophy and Economics (PPE)
Claremont McKenna College. Claremont, CA (May 1994)

Selected Recent Cases

Theibes et al. v. Wal-Mart Stores, Inc. (Federal Court District of Oregon)
Wage and hour case involving off the clock, lunch and rest break claims. Developed a database that integrated payroll records, timekeeping records, and information from a large sample of plaintiff deposition testimony. Database was used to develop a range of damage scenarios and was instrumental in providing information for witness impeachment at trial.

Olivas et al. v. Smart and Final Corp. (Superior Court, State of California, Orange County)
Wage and hour case involving off the clock, lunch and rest break claims, alteration of time records, among other claims. Developed a damages database that integrated payroll data, punch-clock data and plaintiff testimony. Provided ongoing damages estimation and analysis. Developed statistical approaches to the assessment of meal period and timekeeping anomalies with respect to both damages and issues of class suitability.

Chavez v. IBP, Inc.
Alvarez v. IBP, Inc. (District Court for the Eastern District of Washington)
Wage and hour cases involving preliminary and postliminary donning, doffing and activity time. Constructed a large damages database from raw payroll records, integrating job specific time and motion studies related to donning, doffing and activity times. Database was used at trial to provide data and exhibits for witness examination. Provided and ongoing critique of plaintiffs' damage model that resulted in major revisions and corrections to plaintiffs' damage calculations prior to final judgment

In Re: Terazosin Hydrochloride Antitrust Litigation (MDL-1317) US Disrict Court, Southern District of Florida
In Re: Cardizem CD Antitrust Litigation (MDL-1278) US District Court Eastern District Michigan
Developed and maintained complex transactional databases for the purpose of calculating wholesale pharmaceutical overcharges for a group of large retail pharmacies. Provided ongoing data support through mediation and supervised the production of expert and rebuttal reports for an independent expert.

Selected Research

"Per Pound or Not Per Pound? An Economic Analysis of Produce Pricing Practices," with Randall R. Rucker and Keith B. Leffler. Staff Paper 2001-5, Dept. of Agricultural Economics and Economics, Montana State University, Bozeman, MT, November 2001.

Measurement Costs and the Organization of Retail Markets.
Masters Thesis, Department of Economics, Montana State University, Bozeman.

"Private Leasing of Public Resources: The Effects of Changes in Property Rights Regimes at the Bureau of Reclamation's Canyon Ferry Cabin Program," with Anderson, Terry L., Daniel K. Benjamin, and Randal R. Rucker. Staff Paper No. 98-2, Dept. of Agricultural Economics and Economics, Montana State University-Bozeman, December 1998.

Effects of long term bond financing on the financial health of the Seattle Monorail project. Research culminated in testimony before the Washington Senate Transportation subcommittee.

CHRISTINA P. TAPIA

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(206) 852 - 1412 • ctapia@u.washington.edu

Education

Department of Economics, Ph.D. Program — Estimated completion: June 2008
University of Washington; Seattle, Washington.

M.A., Economics — June 2002
University of Washington; Seattle, Washington. GPA: 3.72

M.Ed., Teacher Education Program — March 1997
University of Washington; Seattle, Washington. GPA: 3.86
Washington State teaching certificate. Endorsements:
Economics and History (majors), English and Social Studies.

B.A., Economics, History — June 1995
University of Washington; Seattle, Washington. GPA: 3.91, Major GPA: 3.94
Graduated *magna cum laude* with college honors in Economics.

Work Experience

Economic Consultant / Data Analyst — March 2003 to Present
Nickerson & Associates; Seattle, Washington — Internship: June 2001 to March 2002

- Estimate economic damages in wrongful termination, wrongful death, and personal injury cases. Involved research into issues of employment contracts and compensation policies, worklife expectancy, wage growth rates, net discount rates and consumption patterns.
- Work on all phases of consulting projects from the initial planning phase, to managing the construction of datasets, to calculation of damages for use in mediation, expert report and preparation for trial.
- Devise efficient approach to calculating damages using a variety of techniques and software programs including primarily SAS, Access and Excel.
- Calculate economic damages, synthesize results and present results in clear, persuasive format to varied audience including attorneys, economists, judges, and business leaders.
- Complete background research into economic and legal issues, state and federal labor and tax laws surrounding case in order to develop model for analysis.

Financial Associate — October 2002 to March 2003
A.G. Edwards and Sons, Inc.; Bend, Oregon

- Produced and explained various financial reports including portfolio diversification, realized and unrealized gain/loss and expected income reports for clients' accounts.
- Work closely with senior financial consultants, clients, accountants, attorneys, and other financial institutions to establish, manage and improve accounts.
- Track accounts and follow through to ensure proper changes to meet desired objectives.
- Understand and apply SEC and NASD regulations regarding client accounts and investments.

Teaching Assistant September 2000 to June 2002
University of Washington Business School, Finance and Business Economics; Seattle, Washington
Executive MBA, Technology Management MBA and MBA Programs

- Taught economic concepts to business executives and traditional MBA students.
- Evaluated written work and exams for sound economic reasoning and provided constructive recommendations based on course goals and objectives.
- Prepared and presented oral, written and Power Point presentations to illustrate economic concepts.
- Created graphs, charts and other supporting diagrams using statistical data to enhance presentations.
- Provided technological support for professor.

English Teacher August 1997 to June 2000
Our Lady of the Lake School; Seattle, Washington

- Taught all English/writing classes with emphasis on clear writing and speaking skills.
- Facilitated communication among community, parents and students to develop strategies for growth.
- Developed and implemented new curricula to improve program and increase learning.
- Organized creative, challenging lessons in accordance with class goals and objectives.

Intern and Program Assistant June 1994 to December 1994
Washington State Department of Community, Trade and Economic Development (DCTED)
and the Clean Washington Center (CWC); Seattle, Washington

- Researched markets for Washington State products to strengthen regional economy.
- Matched Washington State businesses with available national and international contracts.
- Established relationships and provided support for local businesses.
- Maintained database and managed accounts for Center's reports.

Program Coordinator Summers of 1993, 1994 and 1995
Foundation for Teaching Economics; Davis, California
U. W. and U. C. Davis campuses

- Coordinated "Economics for Leaders" program and facilitated lessons to teach economic concepts.
- Assisted in evaluation of program and worked with team to implement improvements.

Honors, Awards, and Professional Memberships

Member of Phi Beta Kappa Honor Society.
Member of Omicron Delta Epsilon (Economics Honor Society).
AHEPA Scholarship Award, 2000.
Earhart Foundation Fellowship, 1995.
Intercollegiate Studies Institute Honors Fellow, 1995.
Outstanding Scholar Award, Department of Economics, 1995.
George and Pearl Corkery Memorial Scholarship for academic achievement in Economics, 1993.
University of Washington Undergraduate Scholar Award, 1990, 1991, 1992, 1993, 1994.

Samuel Francis Fisher

Dartmouth College
HB 1236
Hanover, NH 03755

sffisher@dartmouth.edu
(206) 251-6946

Education

Dartmouth College — **Sept 2004 - June 2008**
BA Economics — Hanover, NH
- GPA 3.61/4.0
- Studied at the University of Otago in Dunedin, New Zealand during the winter of 2006.
- Coursework includes: Financial Markets and Intermediaries, Public Economics, Economic Geography, Urban and Land Use Economics, Introductory Statistics

Theodore Roosevelt High School — **Sept 2000 - June 2004**
Salutatorian, AP Scholar — Seattle, WA
- GPA 4.0/4.0
- SAT I Scores: Math-800, Verbal-710
- Recipient of the University District Rotary Club and Edmund F. Maxwell Memorial Scholarships for merit, 2004.

Work Experience

The Marten Law Group — **June 2005 - Sept 2005**
Intern — Seattle, WA
- Researched client, case, expert, and agency information using on-site records, online sources, and direct inquiries.
- Organized said information and integrated it into a comprehensive practice-management application used for marketing/logistical purposes.

Kvamme Construction — **Mar 2004 - Aug 2004**
Laborer — Seattle, WA
- Worked on a wide variety of residential construction projects.
- Duties included layout, scheduling, and subcontractor coordination.

Kim Ricketts Book Events — **Dec 2003 - Present**
Assistant Events Coordinator — Seattle, WA
- Prepare venues for author readings and pre-publication publicity events.
- Perform set-up, teardown, cash register, and general event support.

Fred Hutchinson Cancer Research Center — **June 2002 - Aug 2002**
Research Assistant — Seattle, WA
- Worked under Dr. Janet Stanford in the Prostate Cancer Epidemiology Department.
- Executed data organization and entry on numerous research studies.
- Provided laboratory support for DNA polymerase chain reaction (PRC) research.

Activities

Ultimate Frisbee — **Oct 1997 - April 2006**
Offensive Handler - Dartmouth Men's Team
- Consistently competed at the national level since age 12.
- Won the National Ultimate Players Association Juniors Championship in 2000.

Chi Gamma Epsilon Fraternity — **Oct 2005 - Present**
2006 Summer Social Chairman, Green Key Society Representative — **Hanover, NH**
- Co-managed the $4,500 social budget over the ten-week summer term.
- Serve as the fraternal representative to, and appointed member of, the Green Key Junior Honor Society, a student-run service organization founded in 1921.

Dartmouth Rugby Football Club — **Sept 2005 - Present**
Forward — **Hanover, NH**
- Started competing for the challenge and excitement of learning a new sport.

MELISSA HAUGEN

EXPERIENCE:

Data Analyst, Nickerson and Associates, Seattle, WA, June 2001—present

- Analyze and compile data sets for use in economic loss calculations for class action employment litigation as well as complex antitrust litigation.
- Provide economic loss estimates for individual personal injury and wrongful termination matters.
- Research various topics and review documents to aid in economic and legal analysis.

Grain Accountant and Assistant Grain Merchandiser, Fisher Mills Inc., Seattle, WA, July 1998—June 2001

- Managed contracts for over 50 million dollars annually in wheat payments for two flour mills.
- Managed the inventory of five satellite flour delivery stations in three states that handled fifty truckloads of bulk flour each week.
- Assisted Vice President of Logistics and Grain in wheat purchasing decisions and risk management (cash contracts and futures).

EDUCATION:

Bachelors of Science Ag Business, Agribusiness Management Option, Economics Minor
Montana State University, Bozeman, MT
Overall GPA: 3.959; May 1998

Six months study abroad, Economics emphasis
University of York, England, 1997

Summary

Melissa manages large payroll and time keeping data sets used in economic loss calculations for a variety of employment class actions as well as provides analysis to aid council in mediation and settlement strategies. She also has experience analyzing data and maintaining data sets for complex antitrust litigation. She has worked at Nickerson and Associates for over five years and previously worked in various capacities in the grain purchasing department of a flour mill. She received her bachelor's degree in Agricultural Business with an emphasis in Economics from Montana State University.